EPA-450/5-86-008

NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE

EPA Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

STAPPA / ALAPCO State and Territorial Air Pollution Program Administrators
Association of Local Air Pollution Control Officials

Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics

July 1986

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NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE: BIBLIOGRAPHY OF SELECTED REPORTS AND FEDERAL REGISTER NOTICES RELATED TO AIR TOXICS

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July 1986

U.S. Environmental Protection Agency

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PREFACE

The EPA's primary regulatory effort at controlling toxic air contaminants has been undertaken by authority of Section 112 of the Clean Air Act, which established the National Emission Standards for Hazardous Air Pollutants (NESHAP) program. Under this program, EPA has promulgated 11 national standards for 6 hazardous air pollutants. In response to mounting public concern over continuing exposure to toxic air pollutants, EPA has accelerated its standard setting process and is currently studying many potentially hazardous substances for possible regulatory action. In addition, State and local agencies have developed or are now developing regulatory programs to complement Federal activities.

In response to State and local agency requests for assistance in information exchange, and to support these agencies in their air pollution control efforts, EPA has designed and is implementing an information dissemination center, known as the National Air Toxics Information Clearinghouse (NATICH). The design and implementation of the Clearinghouse has been conducted in close coordination with the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO).

The purpose of this bibliography is to provide State and local agencies with citations to reports and Federal Register notices useful to them in developing and operating air toxics control programs. The reports selected for this bibliography were published by the following agencies: U. S. Environmental Protection Agency, National Academy of Sciences, National Cancer Institute, National Toxicology Program, National Institute of Occupational Safety and Health, and World Health Organization. This edition of the bibliography updates, expands, and supersedes two bibliographies previously published by the National Air Toxics Information Clearinghouse: Bibliography of Selected EPA Reports and Federal Register Notices (January 1985) and Selected Bibliography of Health Effects/Risk Assessment Information (July 1984). The citations selected for this bibliography were compiled through April 1986.

The Clearinghouse plans to update this bibliography on a regular basis. Other publications of the Clearinghouse include:

- National Air Toxics Information Clearinghouse: Rationale for Air Toxics Control in Seven State and Local Agencies, EPA-450/5-86-005, PB86-181179/AS, August 1985;
- National Air Toxics Information Clearinghouse: NATICH Data Base Report on State and Local Agency Air Toxics Activities, EPA-450/5-86-006, September 1985;
- National Air Toxics Information Clearinghouse: NATICH Data Base Users Guide for Data Viewing, EPA-450/5-85-008, PB86-123601/AS, September 1985;
- National Air Toxics Information Clearinghouse: How The Clearinghouse Can Help to Answer Your Air Toxics Questions, EPA-450/5-86-009, July 1986;
- National Air Toxics Information Clearinghouse: Ongoing Research and Regulatory Development Projects, EPA-450/5-86-007, June 1986; and
- National Air Toxics Information Clearinghouse Newsletter, A Periodical, 12 issues to date, December 1983 - June 1986.

ABSTRACT

The National Air Toxics Information Clearinghouse has been established by the EPA Office of Air Quality Planning and Standards for the purpose of facilitating information transfer among Federal, State, and local air quality management agencies. This document has been published as part of that effort. The purpose is to provide State and local agencies and other Clearinghouse users with citations to reports and Federal Register notices useful in developing and operating air toxics control programs. The reports selected for this bibliography were published by the following agencies: U. S. Environmental Protection Agency, National Academy of Sciences, National Cancer Institute, National Toxicology Program, National Institute of Occupational Safety and Health, and World Health Organization.

This document has four parts. The introductory material discusses the scope and organization and contains information necessary for the proper use of the document. Part 2 contains the report and Federal Register notice entries with bibliographic information and, in most cases, an abstract. Part 3 consists of an index to the reports by document type, pollutant class or name, Chemical Abstracts Service (CAS) number, source, Standard Industrial Classification (SIC) code number, and sponsoring agency. Part 4, the Appendices, cites the NIEHS research bibliography, lists unpublished sources of EPA information, and contains ordering information for all of the publications listed in the bibliography.

This document was submitted in partial fulfillment of Contract No. 68-02-3889, Work Assignment No. 78, by Radian Corporation under the sponsorship of the U. S. Environmental Protection Agency. This edition of the bibliography updates, expands, and supersedes two bibliographies previously published by the National Air Toxics Information Clearinghouse: Bibliography of Selected EPA Reports and Federal Register Notices (January 1985) and Selected Bibliography of Health Effect/Risk Assessment Information (July 1984). Compilation of citations for this edition was completed in April 1986.

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PART 1. INTRODUCTION

This bibliography has been developed by the National Air Toxics Information Clearinghouse and the Pollutant Assessment Branch of the EPA Office of Air Quality Planning and Standards (OAQPS). Over 950 bibliographic citations to reports and Federal Register notices related to toxic air pollutants are included. To facilitate the use of this bibliography, citations are indexed by document type, pollutant name or class, Chemical Abstract Service (CAS) number, source category, Standard Industrial Classification (SIC) code, and sponsoring agency.

Like other Clearinghouse publications, the bibliography is designed to help Clearinghouse users identify sources of information for specific air toxics questions or problems. This edition of the bibliography announces over 425 new reports and Federal Register notices. In future updates, new reports and notices will be added.

The information contained in this bibliography is also available through the National Air Toxics Information Clearinghouse on-line data base. For more information about accessing the data base, contact Nancy Riley, EPA Pollutant Assessment Branch, at (919) 541-5519.

Document Scope

This bibliography contains a selected list of reports and Federal Register notices which have been identified as being useful to State and local agencies developing and operating air toxics control programs. The reports were published by the following agencies: U. S. Environmental Protection Agency (EPA), National Academy of Sciences (NAS), National Cancer Institute (NCI), National Toxicology Program (NTP), National Institute of Occupational Safety and Health (NIOSH), and World Health Organization (WHO).

The EPA citations include the following types of documents:

- Health assessments

- Exposure assessments
- Source assessments
- Emission factors documents
- Technical monitoring documents
- Methodologies for source sampling and ambient monitoring
- New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) background information documents
- Control technology assessments
- Regulatory development guidance documents
- Federal Register notices

Citations were selected within each document type according to their relevance to air toxics work. The background information documents for New Source Performance Standards were included in this bibliography because, while their focus is on control of criteria pollutants, they also contain valuable information on the sources and control of noncriteria, potentially toxic air pollutants. Two document types are new to this edition of the bibliography: control technology assessments and regulatory development guidance documents.

The Federal Register notices include the Agency's announcements regarding Sections 111(d) and 112 of the Clean Air Act dealing with the New Source Performance Standards and the National Emission Standards for Hazardous Air Pollutants programs, respectively. The notices also include proposed guidelines concerning health, exposure, and risk assessments issued by the Office of Health and Environmental Assessment.

Citations for each of these document types were compiled by contacting the EPA office currently conducting that particular type of work and by supplementing those contributions by searching published lists of EPA reports, such as the EPA Publication Bibliography and the ORD Publications Announcement. The following EPA offices were among those contacted:

- Office of Air Quality Planning and Standards;
- Office of Toxic Substances;

- Office of Policy, Planning and Evaluation;
- Office of Policy Analysis;
- Office of Research and Development;
- Office of Health and Environmental Assessment;
- Environmental Criteria Assessment Office;
- Air and Energy Engineering Research Laboratory;
- Health Effects Research Laboratory;
- Atmospheric Sciences Research Laboratory; and
- Environmental Monitoring Systems Laboratory.

Abstracts for the EPA reports were obtained from the EPA Publications Bibliography, the National Technical Information Service (NTIS) data base, or the technical data sheet included in the report. Abstracts for the Federal Register notices were prepared from the Summary and Supplementary Information sections of each notice.

Citations to reports from the other five sponsoring agencies (NAS, NCI, NTP, NIOSH, and WHO) included in this bibliography focus on health, risk, and exposure assessments. Most documents discuss one or more potentially toxic chemicals, and a few emphasize exposure to toxic substances in a particular industry. While ambient air exposure was the primary area of interest, reports on occupational exposure and exposure via drinking water were also included.

The research of the National Institute of Environmental Health Sciences (NIEHS) is included by reference to the National Institute of Environmental Health Sciences Bibliography 1966-1984 (see Appendix A). The NIEHS does not typically publish individual monographs or reports; rather research results are generally published in technical journal articles, conference papers, and books. These types of publications were outside the scope of the bibliography.

Citations to reports from each of the five agencies on the topics of health effects and risk and exposure assessments were compiled from agency catalogs, from the National Technical Information Service data base, and from printouts generated from in-house agency data bases. Abstracts were obtained from each of these sources when available.

Organization of Document

This document consists of four parts. The introductory material discusses scope and organization. It also contains explanatory information necessary for the proper use of the bibliography, such as keys to agency and office abbreviations and two sample bibliographic entries. Part 2 contains the report and Federal Register notice entries with bibliographic information and, in most cases, an abstract. The report entries are arranged by document order number. Figure 1 explains each line of two sample entries. Each entry has been assigned certain key words or descriptors pertaining to document type, pollutant, source, and sponsoring agency. These descriptors are used to generate the index and help users have several ways to access reports of interest.

Part 3 consists of an index that will enable users to identify reports of interest. Index categories include document type, pollutant class or name, Chemical Abstracts Service (CAS) number, source category, Standard Industrial Classification (SIC) code number, and sponsoring agency. Groups of chemicals or pollutants such as "organic compounds" that could not be identified more precisely by individual chemical names were assigned unique Clearinghouse identifiers in the place of CAS numbers. A list of these identifiers is found in Table 1. A key to the sponsoring agency abbreviations appears in Table 2. Table 3 lists the document types and their abbreviations. A table of contents to the index is found at the beginning of Part 3. This table of contents consists of an alphabetic and numeric list of all descriptors, along with their corresponding page numbers in the index. These descriptors, or index terms, represent subject headings which describe the content of a document.

Part 4 consists of three appendices: Appendix A cites the NIEHS research bibliography; Appendix B lists miscellaneous unpublished sources of EPA information; Appendix C contains ordering information for all agency reports, order forms, and an NTIS price code schedule. The items listed in the appendices are not included in the index.

FIGURE 1. SAMPLE ENTRIES

Report entries are arranged alphanumerically by document order number. A sample entry follows:

PB85-183085/REB	Document Order Number
Exposure Assessment for Asbestos-Contaminated Vermiculite	Report Title
EPA, Washington, D.C., OTS	Sponsoring Agency
Versar, Inc.	Corporate Author
G. H. Dixon, et al.	Personal Authors
Feb 85, 110 p, EPA-560/5-85-013, PC A06/MF A02	Date, Pages, Report Number, Price or Price Code
GPO No. 000-000-00000-0, $25.00	Additional Order Number, Price
Abstract: This document is an exposure assessment for asbestos-contaminated vermiculite. Such exposure is found to occur via inhalation . . .	Abstract
EA Exposure Assessment EPA U. S. Environmental Protection Agency 1332-21-4 Asbestos	Descriptors

A sample Federal Register notice entry follows:

51 FR 6382 02-21-86	FR Citation (Volume, Beginning Page, Date)
National Emission Standard for Hazardous Air Pollutants; Standard for Radon-222 Emissions from Liscensed Uranium Mill Tailings	Title
EPA, Washington, D.C., ORP	EPA Issuing Office
Abstract: Proposed rule and announcement of public hearing. This proposed standard considers alternative work practice standards . . .	Abstract
FR Federal Register notice EPA U. S. Environmental Protection Agency 10043-92-2 Radon	Descriptors

TABLE 1. CLEARINGHOUSE IDENTIFIERS FOR CHEMICAL GROUPS

Clearinghouse Identifier	Pollutant
CL-ACID	Acidic compounds
CL-ALDEHYD	Aldehydes
CL-AMINE	Amines
CL-CAH	Chlorinated aliphatic hydrocarbons
CL-CARCIN	Carcinogens
CL-CL	Chlorides
CL-COE	Coke oven emissions
CL-CREOSOL	Creosols
CL-CYCLOP	Cycloparaffins
CL-DGAEA	Diethylene gycol alkyl ethers and acetates
CL-DIESEL	Diesel fuel emissions
CL-DIISOCY	Diisocyanates
CL-DIOXIN	Dioxins
CL-FUELOIL	Waste derived fuel oil
CL-GYPSUM	Gypsum
CL-HAZWAST	Hazardous wastes
CL-IAP	Indoor air pollutants
CL-INORGAN	Inorganic compounds
CL-METAL	Metallic compounds
CL-MINDUST	Mineral dusts
CL-MS	Mineral spirits
CL-NAMINE	Nitrosamines
CL-NDC	Naphthalene diisocyanate
CL-N-NITRO	N-nitroso compounds
CL-NITRATE	Nitrates
CL-NITRITE	Nitrites
CL-OH	Hydroxide
CL-ORGANIC	Organic compounds
CL-PCB	Polychlorinated biphenyls

TABLE 1. CLEARINGHOUSE IDENTIFIERS FOR CHEMICAL GROUPS (Continued)

Clearinghouse Identifier	Pollutant
CL-PCT	Polychlorinated terphenyls
CL-PEST	Pesticides
CL-PHENAZO	Phenazopyridine chloride
CL-PHOSPHA	Phosphates
CL-PHOS	Tributyl phosphine, triisopropyl phosphine
CL-PM	Particulate matter
CL-PNA	Polynuclear aromatics
CL-POM	Polycyclic organic matter
CL-RAD	Radiation
CL-RESIN	Resins
CL-SALTS	Salts
CL-SEWSLUD	Sewage sludge
CL-SOLVENT	Solvents
CL-SULFATE	Sulfates
CL-SULFIDE	Sulfides
CL-SULFITE	Sulfite
CL-TIN	Triethyl tin, trimethyl tin
CL-TRS	Total reduced sulfur
CL-VEG	Vegetable oil mists
CL-VOC	Volatile organic compounds
CL-WELD	Welding fumes
CL-WOOD	Wood smoke

TABLE 2. AGENCY AND OFFICE ABBREVIATIONS

KEY TO AGENCY ABBREVIATIONS

EPA	U. S. Environmental Protection Agency
IARC	International Agency for Research On Cancer
NAS	National Academy of Sciences
NCI	National Cancer Institute
NIEHS	National Institute of Environmental Health Sciences
NIOSH	National Institute of Occupational Safety and Health
NTP	National Toxicology Program
WHO	World Health Organization

KEY TO EPA OFFICE ABBREVIATIONS

ASRL	Atmospheric Sciences Research Laboratory
ECAO	Environmental Criteria and Assessment Office
EMSL	Environmental Monitoring Systems Laboratory
ESRL	Environmental Sciences Research Laboratory
HWERL	Hazardous Waste Engineering Research Laboratory
IERL	Industrial Environmental Research Laboratory
MERL	Municipal Environmental Research Laboratory
OA	Office of the Administrator
OAP	Office of Air Programs
OAQPS	Office of Air Quality Planning and Standards
OAR	Office of Air and Radiation
OER	Office of Exploratory Research
OHEA	Office of Health and Environmental Assessment
OMS	Office of Mobile Sources
OMTS	Office of Monitoring and Technical Support
OPTS	Office of Pesticides and Toxic Substances
ORD	Office of Research and Development
ORP	Office of Radiation Programs
OTS	Office of Toxic Substances
WERL	Water Engineering Research Laboratory

TABLE 3. KEY TO DOCUMENT TYPES

CT	Control Technology Assessment
EF	Emission Factor
EA	Exposure Assessment
FR	Federal Register Notices
HA	Health Assessment
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
RDG	Regulatory Development Guidance
RA	Risk Assessment
SA	Source Assessment
SS/AM	Source Sampling/Ambient Monitoring
TM	Technical Monitoring

PART 2. REPORT AND FEDERAL REGISTER NOTICE ENTRIES

AD-A011 862/0
Identification of Environmental Carcinogens
National Cancer Institute
1974, 17 p., PC A02/MF A01

Abstract: Although approximately 6000 compounds have been tested for long term toxicity or carcinogenicity in laboratory animals, only about 3% of these have been active in animals. In humans only 20 to 30 compounds seem to be environmental carcinogens. However, in the past, it has been the unfortunate fact that the effects of most environmental carcinogens were first detected in exposed persons, rather than in laboratory animals. Therefore, it is of utmost importance both to identify any new compounds which may be carcinogenic in animals and to increase the speed, accuracy, and reliability of the physico-chemical determination of such materials - essentially a problem in analytical chemistry. Examples of possible environmental carcinogens are given.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

AD-A087 854/6
Formaldehyde - An Assessment of Its Health Effects
National Academy of Sciences
1983, 45 p., PC A03/MF A01
Publication-on-demand, $8.50

Abstract: This document is an evaluation of the effects of formaldehyde on animals, humans, and in in vitro tests, with emphasis on health risks of exposure to airborne formaldehyde at low concentrations. Consumers have complained of eye and upper respiratory tract irritation, headaches, and drowsiness, and gastrointestinal disturbances, apparently caused by offgassing of formaldehyde from urea-formaldehyde foam insulation, particle board, or plywood. Airborne concentrations of formaldehyde in homes have been reported to range from 0.01 to 31.7 ppm. An ongoing lifetime in rodent indicated there may be a carcinogenic effect of exposure to formaldehyde. A high incidence of squamous cell carcinoma in the nasomaxillary epithelium was reported in rates exposed at 15 ppm. Irritation appears to be the most sensitive response to formaldehyde. However, identification of the toxicologic reaction of greatest concern will have to await the conclusion of ongoing and planned studies. A range of irritation responses associated with exposure to various concentrations of formaldehyde was provided, but there was no evidence of a population threshold for formaldehyde's irritant effects. The Committee recommended that formaldehyde be kept at the lowest practical concentration to minimize adverse effects on public health.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
24	LUMBER AND WOOD PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
50-00-0	FORMALDEHYDE

AD-A093 809/2
Principles of Toxicological Interactions Associated with Multiple Chemical Exposures
National Academy of Sciences
1981, 207 p., PC A10/MF A01
Publication-on-demand, $19.00

Abstract: On a typical day, a U.S. Coast Guard inspector may enter confined spaces on as many as five vessels. Because each of these ships may have carried different cargoes, an inspector could be exposed to a mixture of vapors from five different chemicals. An inspector may be exposed almost daily to benzene, various nitriles, methanol, caustic soda, carbon tetrachloride, vinyl chloride, and ammonia with exposure time varying from a few minutes to 2 hours. Although permissible levels (threshold limit values) have been established for these vapors and must be attained before marine personnel can enter a confined space, the Coast Guard has become increasingly concerned about the interactions that might accrue from these exposures and possibly result in deleterious health effects. In 1978, the Coast Guard asked the National Academy of Sciences for guidance on this problem. One portion of this request called for evaluation of possible synergism among certain chemicals during chronic exposures to low concentrations. To perform this task, a Panel on Evaluation of Hazards Associated with Maritime Personnel Exposed to Multiple Cargo Vapors was formed. This report is a first attempt to assess the added hazards, if any, to marine inspectors who are occupationally exposed to multiple chemicals.

NAS	NATIONAL ACADEMY OF SCIENCES
1310-73-2	SODIUM HYDROXIDE
51	WHOLESALE TRADE-NONDURABLE GOODS
56-23-5	CARBON TETRACHLORIDE
67-56-1	METHANOL
71-43-2	BENZENE
75-01-4	VINYL CHLORIDE
7664-41-7	AMMONIA

AD-A142 133/8
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 1
National Academy of Sciences
Apr 84, 116p, PC A06/MF A01
Publication-on-demand, $13.00

Abstract: This document is one in a series prepared by the Committee that form the basis of the recommendations for EELs and CELs for selected chemicals. Since the Committee began recommending EELs and CELs for its military sponsors (U.S. Army, Navy, and Air Force), the scope of its recommendations has been expanded in response to a request by the National Aeronautics and Space Administration. The CELs, in particular, grew out of a Navy request for exposure limits for atmospheric contaminants in submarines. The EELs and CELs have been used as design criteria by the sponsors in considering the suitability of materials for particular missions (as in a submarine or a spacecraft) and in assessing the habitability of particular enclosed environments. They are recommended for narrowly defined occupational groups and are not intended for application in general industrial settings or as exposure limits for the general public.

EA	EXPOSURE ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY
9711	SIC - 9711 NATIONAL SECURITY

AD-A147 000/4/XAB
Disposal of Industrial and Domestic Wastes: Land and Sea Alternatives
National Academy of Sciences
1984, 221p, PC A10/MF A01
ISBN 0-309-03484-1, $16.50

Abstract: The workshop should be organized into eight panels: public policy, economics, risk assessment, marine sciences, biological effects, land disposal, sewage sludge, and industrial wastes. In addition to organizing the workshop, the steering committee identified information needs for assessing, for a given site and a given waste material, the options of land, sea and air disposal and the environmental, economic, and regulatory criteria for selection among those options. The workshop, entitled 'Land, Sea, and Air Options for the Disposal of Industrial and Domestic Wastes', was held January 16-21, 1983, in Napa Valley, California. The steering committee agreed that it would be potentially most productive for the workshop to consider two cases: (1) the 106-Mile Ocean Waste Disposal Site (Dumpsite 106) off the New Jersey coast, the largest U.S. ocean site for disposal of industrial wastes, and (2) the sewage sludge disposal problem in Los Angeles and Orange counties, California.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

AD-A152 230/9/XAB
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 3: Bromotrifluoromethane
National Academy of Sciences
Oct 84, 30p, PC A03/MF A01
Publication-on-demand, $8.50

Abstract: This report contains information on the physical, chemical, and toxicologic properties of CBrF3, a fire extinguishing chemical. It also contains emergency exposure limits (EELs) for 30 min and 1 hr, and contains exposure limits for 90 days. Topics discussed in this volume include: Effects on Humans, Effects on Animals, Central Nervous/System Effects, Cardiovascular Effects, Effects of Prolonged Exposure, Carcinogenicity, Mutagenicity and Teratogenicity, Pharmacokinetics, Health Effects and CBrF3 Decomposition Products and Inhalation Exposure Limits.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
75-63-8	TRIFLUORMONOBROMOMETHANE

AD-A152 471/9/XAB
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 2
National Academy of Sciences
Oct 84, 131p, PC A07/MF A01
Publication-on-demand, $14.50

Abstract: The National Research Council's Committee on Toxicology recommends emergency exposure limits (EELs), short-term public limits (STPLs), and short-term public emergency limits (SPELs--formerly called public emergency limits, or PELs) for a variety of chemicals of concern to its sponsoring agencies. This document is one in a series that form the basis of the recommendations for EELs and CELs for selected chemicals. Since the Committee began recommending EELs and CELs for its military sponsors, the scope of its recommendations has been expanded in response to requests by the U.S. Coast Guard and the National Aeronautics and Space Administration. The CELs grew out of a Navy request for exposure limits for atmospheric contaminants in submarines. The EELs and CELs have been used as design criteria by the sponsors in considering the suitability of materials for particular missions (as in a submarine or a spacecraft) and in assessing the habitability of particular enclosed environments. They are recommended for narrowly defined occupational groups and are not intended for application in general industrial settings or as exposure limits for the general public. This report provides a short review of the chemical and physical properties of these chemicals and their toxic-potential in animals and humans.

EA	EXPOSURE ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY
9711	SIC - 9711 NATIONAL SECURITY

DOE/CH/93015-3
Trace-Element Geochemistry of Coal Resource Development Related to Environmental Quality and Health
National Academy of Sciences
1980, 165p, PC A08/MF A01
ISBN 0-309-03048-X, $12.50

Abstract: This report assesses for decision makers and those involved in coal resource development the environmental and health impacts of trace-element effects arising from significant increases in the use of coal, unless unusual precautions are invoked. Increasing demands for energy and the pressing need for decreased independence of the United States on imported oil require greater use of coal to meet the nation's energy needs during the next decade. If coal production and consumption are increased at a greatly accelerated rate, concern arises over the release, mobilization, transportation, distribution, and assimilation of certain trace elements, with possible adverse effects on the environment and human health. It is, therefore, important to understand their geochemical pathways from coal and rocks via air, water, and soil to plants, animals, and ultimately humans, and their relation to health and disease. This report describes the amounts and distribution of trace elements related to the coal source; the various methods or coal extraction, preparation, transportation, and use; and the disposal or recycling of the remaining residues or wastes. The known or projected health effects are discussed at the end of each section.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
11	ANTHRACITE MINING
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
46	PIPE LINES, EXCEPT NATURAL GAS
461	PIPE LINES, EXCEPT NATURAL GAS
4619	PIPE LINES, NEC
50	WHOLESALE TRADE-DURABLE GOODS
505	METALS AND MINERALS, EXCEPT PETROLEUM
5052	COAL AND OTHER MINERALS AND ORES

GPO 017-033-00234-7
Criteria for a Recommended Standard: Occupational Exposure to Refined Petroleum Solvents
National Institute of Occupational Safety and Health
1977, 255 p., $7.00
NIOSH PUB No: 77-192, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-SOLVENT	SOLVENTS
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

GPO 017-033-00284-3
Criteria for a Recommended Standard: Occupational Exposure to Cresol
National Institute of Occupational Safety and Health
1978, 127 p., $6.00
NIOSH PUB No: 78-133, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1319-77-3	CRESOL (ALL ISOMERS)

GPO 017-033-00418-8
Pocket Guide to Chemical Hazards
National Institute of Occupational Safety and Health
1985, 254p, $5.00
NIOSH Pub. No. 85-114, Avail NIOSH

Abstract: A source of summary information for employees, employers, occupational health professionals, and others who need data on chemical hazards is provided. The pocket guide includes key information and data in an abbreviated tabular format for 397 workplace chemical hazards for which there are specific Federal regulations. Each listing includes chemical name, synonyms, permissible exposure limit, immediately dangerous to life or health concentration, physical description, chemical and physical properties, incompatibilities, measurement method, personal protection and sanitation methods, respirator selection, route of entry, symptoms, first aid, and target organs.

NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

GPO 017-033-00421-8
Registry of Toxic Effects of Chemical Substances, 1983-84 Cumulative Supplement to the 1981-82 Edition, 2 Volumes
National Institute of Occupational Safety and Health
1985, 2112p, $27.00
NIOSH Pub. No. 86-103, Unavail NIOSH

Abstract: This thirteenth edition is a supplement to the 1981-82 edition and contains all new and altered data entered into the file during 1983-84. It also includes all substances for which regulatory or consensus group information is cited. This supplement contains prime name chemical substances with their associated toxicity data, and it should be used together with the 1981-82 edition if the complete file is needed.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
RDG	REG DEVELOPMNT GUIDE

GPO 055-000-00251-7
Compilation of Air Pollutant Emission Factors. V. 1: Stationary Point and Area Sources
EPA, Research Triangle Park, NC, OAQPS
1985, 888p, AP-42, $20.00

Abstract: This fourth edition is issued in looseleaf form. It presents recent data on emissions of atmospheric pollutants for which sufficient information exists to establish realistic emission factors. This edition consists chiefly of statistical tables and charts. Volume I contains emission factor data for stationary point and area sources. Volume II, which was formerly Chapter 3.0 in the third edition, officially revises all previous emission factor documents (AP-42) for highway mobile sources. Future supplements will be available from the U.S. Government Printing Office.

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

GPO 055-000-00252-5
Compilation of Air Pollutant Emission Factors. V. 2: Mobile Sources
EPA, Ann Arbor, MI, OMS
1985, 587p, AP-42, $19.00

Abstract: This fourth edition is issued in looseleaf form. It presents recent data on emissions of atmospheric pollutants for which sufficient information exists to establish realistic emission factors. This edition consists chiefly of statistical tables and charts. Volume I contains emission factor data for stationary point and area sources. Volume II, which was formerly Chapter 3.0 in the third edition, officially revises all previous emission factor documents (AP-42) for highway mobile sources. Future supplements will be available from the U.S. Government Printing Office.

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

GPO 717-024-00000-1
Registry of Toxic Effects of Chemical Substances (Microfiche)
National Institute of Occupational Safety and Health
$34.00

Abstract: Quarterly microfiche periodical issued in January, April, July, and October. RTECS provides basic information on the known toxic and biological effects of chemical substances. It is intended for use by employers, employees, physicians, industrial hygienists, toxicologists, researchers and others concerned with the proper and safe handling of chemicals. Each fiche set contains the complete RTECS data file.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
RDG	REG DEVELOPMNT GUIDE

HRP-0028011/5
Asbestos - An Information Resource
National Cancer Institute
1978, 187 p., PC A09/MF A01

Abstract: This book reviews the uses of asbestos, the biological effects of ingesting asbestos fibers in the air and in water and food, and the studies linking asbestos with disease, both as a carcinogen and as a noncarcinogen. It also provides a description of the types of occupations that might experience high levels of airborne fibers, for example, automotive mechanics working on brakes and clutches, insulation workers, roofers, and drywall mechanics, and occupations in which asbestos is used in clothing (as for firefighters). The book also reviews the exposure to asbestos from nonoccupational sources: fibers in the air, food, and water. In addition, strategies and programs for control of the asbestos hazard are considered: attention is given to physical control, medical management, and education. The appendixes deal with such topics as the sources of asbestos, Federal regulations on exposure, smoking, and educational materials. Seven tables provide data on the U.S. consumption of asbestos, the uses of asbestos, death from respiratory cancer, and exposure risks.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
08	FORESTRY
085	FORESTRY SERVICES
0851	FORESTRY SERVICES
1332-21-4	ASBESTOS
17	SPECIAL TRADE CONTRACTORS
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2952	ASPHALT FELTS AND COATINGS
30	RUBBER AND MISC. PLASTICS PRODUCTS
304	RUBBER AND PLASTICS HOSE AND BELTING
3292	ASBESTOS PRODUCTS
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
52	BUILDING MATERIALS & GARDEN SUPPLIES
521	LUMBER AND OTHER BUILDING MATERIALS
5211	LUMBER AND OTHER BUILDING MATERIALS

HRP-0028012/3
Vinyl Chloride - An Information Resource
National Cancer Institute
1978, 122 p., PC A06/MF A01

Abstract: A discussion of the link between exposure to vinyl chloride and the occurrence of toxic, nonmalignant illnesses involving skin, bones, liver, lungs, and blood is provided. The regulatory history of vinyl chloride is outlined. It is pointed out that the potential for human contact with vinyl chloride is great. About 2.5 billion kilograms of vinyl chloride are produced each year in the United States. The vinyl chloride is produced at 15 plants employing 900 workers. Vinyl chloride is also polymerized at 39 plants, employing more than 5,500 workers. The Environmental Protection Agency has estimated that approximately five million people live near enough to vinyl chloride facilities to be within range of detectable airborne concentrations of the gas. The production, uses, and dispersion of vinyl chloride are discussed and evidence of its toxic and carcinogenic effects are summarized. Strategies for the control of vinyl chloride are suggested. The appendixes contain a list of vinyi-chloride-related compounds, an approach to evaluation and control of vinyl chloride exposure, and sources for additional information.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

ISBN 0-309-02314-9
Medical and Biologic Effects of Environmental Pollutants: Nickel
National Academy of Sciences
1975, 277 p., $16.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-02-0	NICKEL

ISBN 0-309-02401-3
Decision Making for Regulating Chemicals in the Environment
National Academy of Sciences
1975, 232 p., $14.25

Abstract Not Available

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

ISBN 0-309-02441-2
Medical and Biologic Effects of Environmental Pollutants: Vapor-Phase Organic Pollutants
National Academy of Sciences
1976, 411 p., $14.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

CL-ORGANIC	ORGANIC COMPOUNDS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-02503-6
Medical and Biologic Effects of Environmental Pollutants: Selenium
National Academy of Sciences
1976, 203 p., $11.75

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7782-49-2	SELENIUM COMPOUNDS, AS SE

ISBN 0-309-02519-2
Medical and Biologic Effects of Environmental Pollutants: Chlorine and Hydrogen Chloride
National Academy of Sciences
1976, 282 p., $11.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7647-01-0	HYDROGEN CHLORIDE
7782-50-5	CHLORINE

ISBN 0-309-02531-1
Medical and Biologic Effects of Environmental Pollutants: Ozone and Other Photochemical Oxidants
National Academy of Sciences
1977, 719 p., $19.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
10028-15-6	OZONE

ISBN 0-309-02536-2
Medical and Biologic Effects of Environmental Pollutants: Copper
National Academy of Sciences
1977, 115 p., $8.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-50-8	COPPER

ISBN 0-309-02604-0
Medical and Biologic Effects of Environmental Pollutants: Arsenic
National Academy of Sciences
1977, 322 p., $14.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biologic effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-38-2	ARSENIC

ISBN 0-309-02619-9
Drinking Water and Health. Volume 1.
National Academy of Sciences
1977, 905 p., $28.50

Abstract: The findings and recommendations of a study which was conducted to explore the potentially harmful effects that impurities in water may have on the health of those drinking it were explored. The study, whose purpose, scope, and duration were outlined in the Safe Drinking Water Act of 1974, was carried out by the Committee on Safe Drinking Water of the National Research Council. The general approach, principles, and criteria adopted in the study are outlined following a brief historical note on the search for pure water. The procedure involved a review of the scientific literature. The discussion which follows deals with safety and risk assessment. Attention is given to the scientific methods and criteria used for evaluating the long-term effects on and hazards to humans. The principal microbiological contaminants of drinking water in the United States - bacteria, viruses, and pathogenic protozoa - are then discussed. Subsequent material focuses on solid particles in suspension, inorganic solutes, organic solutes, and radioactivity in drinking water. Tables, figures, and appendixes containing an executive summary and material on legislation accompany the text.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC

ISBN 0-309-02631-8
Medical and Biologic Effects of Environmental Pollutants: Carbon Monoxide
National Academy of Sciences
1977, 239 p., $11.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
630-08-0	CARBON MONOXIDE

ISBN 0-309-02885-X
Polychlorinated Biphenyls
National Academy of Sciences
1979, 182 p., $8.75

Abstract Not Available

CL-PCB	POLYCHLORINATED BIPHENYLS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

ISBN 0-309-03130-3
Health Effects of Exposure to Diesel Exhausts
National Academy of Sciences
1981, 169 p., $10.25

Abstract Not Available

CL-DIESEL	DIESEL
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-03230-X
The Health Effects of Nitrates, Nitrites, and n-Nitroso Compounds
National Academy of Sciences
1981, 544 p., $14.95

Abstract Not Available

CL-N-NITRO	N-NITROSO COMPOUNDS
CL-NITRATE	NITRATES
CL-NITRITE	NITRITES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-03349-7
Risk Assessment in the Federal Government: Managing the Process
National Academy of Sciences
1983, 191 p., $11.75

Abstract: The regulation of potentially hazardous substances has become one of the most controversial issues of the last decade. This new volume evaluates past efforts to develop and use risk assessment guidelines, reviews the experience of regulatory agencies with different administrative arrangements for risk assessment, and evaluates various proposals to modify procedures. The report's conclusions and recommendations can be applied across the entire field of environmental health.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

ISBN 0-309-03381-0
Drinking Water and Health. Volume 5.
National Academy of Sciences
1983, 157 p., $15.95

Abstract: This latest volume in the Drinking Water and Health series examines for the first time the health effects of 8 compounds found in drinking water and updates earlier evaluations of 13 other contaminants. Reviewed are important health effects of arsenic and asbestos intake through the water supply.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC

ISBN 0-309-03430-2
Protection Against Trichothecene Mycotoxins
National Academy of Sciences
1983, 227 p., $17.95

Abstract: In response to growing concern about the use of trichothecenes in warfare, this report studies the effects of "yellow rain" on civilians and military personnel who might be exposed to high levels of these substances. The repot discusses the natural occurrences of mycotoxins, methods of detection and detoxification, long-term environmental effects, effects on humans and animals, and strategies for prevention and treatment.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-03527-9
Disposal of Chemical Munitions and Agents
National Academy of Sciences
1984, 216p, $16.50

Abstract: This study recommends the most effective, most economical, and safest means for disposing of the Department of the Army's aging and obsolete stockpiles of chemical agents and munitions. One section evaluates the state of the munitions and the eight sites where they are stored, including analyses of risk, security, and medical and legal aspects. A second section reviews current and future disposal technologies; transportation and human factors are also considered.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY

ISBN 92-2-154090-7
WHO Environmental Health Criteria, No. 30, Principles for Evaluating Health Risks to Progeny Associated with Exposure to Chemicals during Pregnancy
World Health Organization
1984, 177p, $8.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-120546-6
Technical Report Series, No. 546, Assessment of the Carcinogenicity and Mutagenicity of Chemical, Report of a WHO Scientific Group
World Health Organization
1974, 19 p., $2.00

Abstract Not Available

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-120647-0
Technical Report Series, No. 647, Recommended Health-based Limits in Occupational Exposure to Heavy Metal
World Health Organization
1980, 116 p., $4.00

Abstract: For each chemical or substance covered, the document summarizes properties, uses, and health hazards. Included are: metabolism of the compound, assessment of exposure, health effects, and relationships between exposure and effects. Conclusions regarding health-based occupational exposure limits, recommendations, and research possibilities are also given.

CL-METAL METALLIC COMPOUNDS
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120662-4
Technical Report Series, No. 662, Health Effects of Combined Exposures in the Work Environment Report of a WHO Expert Committee (Geneva, 1980)
World Health Organization
1981, 76 p., $2.00

Abstract Not Available

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120664-0
Technical Report Series, No. 664, Recommended Health-based Limits in Occupational Exposure to Selected Organic Solvents
World Health Organization
1981, 84 p., $3.00

Abstract: For each chemical or substance covered, the document summarizes properties, uses, and health hazards. Included are: metabolism of the compound, assessment of exposure, health effects, and relationships between exposure and effects. Conclusions regarding health-based occupational exposure limits, recommendations, and research possibilities are also given.

CL-SOLVENT SOLVENTS
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120677-2
Technical Report Series, No. 677, Recommended Health-based Limits in Occupational Exposure to Pesticides
World Health Organization
1982, 110 p., $4.00

Abstract: For each chemical or substance covered, the document summarizes properties, uses, and health hazards. Included are: metabolism of the compound, assessment of exposure, health effects, and relationships between exposure and effects. Conclusions regarding health-based occupational exposure limits, recommendations, and research possibilities are also given.

CL-PEST PESTICIDES
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154061-3
WHO Environmental Health Criteria, No. 1, Mercury
World Health Organization
1976, 131 p., $7.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
7439-97-6	MERCURY

ISBN 92-4-154062-1
WHO Environmental Health Criteria, No. 2, Polychlorinated Biphenyls and Terphenyls
World Health Organization
1976, 85 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

CL-PCB	POLYCHLORINATED BIPHENYLS
CL-PCT	POLYCHLORINATED TERPHENYLS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
11097-69-1	AROCLOR 1254
118-74-1	HEXACHLOROBENZENE
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

ISBN 92-4-154065-6
WHO Environmental Health Criteria, No. 5, Nitrates, Nitrites, and N-Nitroso Compounds
World Health Organization
1978, 107 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

CL-N-NITRO N-NITROSO COMPOUNDS
CL-NITRATE NITRATES
CL-NITRITE NITRITES
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154066-4
WHO Environmental Health Criteria, No. 6, Principles and Methods for Evaluating the Toxicity of Chemicals. Part 1
World Health Organization
1978, 272 p., $14.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154067-2
WHO Environmental Health Criteria, No. 7, Photochemical Oxidants
World Health Organization
1979, 110 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
10028-15-6 OZONE

ISBN 92-4-154069-9
WHO Environmental Health Criteria, No. 9, DDT and its Derivatives
World Health Organization
1979, 194 p., $8.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
50-29-3 DDT

ISBN 92-4-154070-2
WHO Environmental Health Criteria, No. 10, Carbon Disulfide
World Health Organization
1979, 100 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
75-15-0	CARBON DISULFIDE

ISBN 92-4-154075-3
WHO Environmental Health Criteria, No. 15, Tin and Organotin Compounds. A preliminary review
World Health Organization
1980, 109 p., $3.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
7440-31-5	TIN, AS SN

ISBN 92-4-154077-X
WHO Environmental Health Criteria, No. 17, Manganese
World Health Organization
1981, 110 p., $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7439-96-5 MANGANESE

ISBN 92-4-154078-8
WHO Environmental Health Criteria, No. 18, Arsenic
World Health Organization
1981, 173 p., $10.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7440-38-2 ARSENIC

ISBN 92-4-154079-6
WHO Environmental Health Criteria, No. 19, Hydrogen Sulfide
World Health Organization
1981, 48 p., $3.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7783-06-4 HYDROGEN SULFIDE

ISBN 92-4-154080-X
WHO Environmental Health Criteria, No. 20, Selected Petroleum Products
World Health Organization
1982, 139 p., $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154084-2
WHO Environmental Health Criteria, No. 24, Titanium
World Health Organization
1982, 68 p., $5.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7440-32-6 TITANIUM

ISBN 92-4-154085-0
WHO Environmental Health Criteria, No. 25, Selected Radionuclides
World Health Organization
1983, 237 p., $9.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

CL-RAD RADIATION
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154086-9
WHO Environmental Health Criteria, No. 26, Styrene
World Health Organization
1983, 123p, $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
100-42-5	STYRENE

ISBN 92-4-154087-7
WHO Environmental Health Criteria, No. 27, Guidelines on Studies in Environmental Epidemiology
World Health Organization
1983, 351p, $13.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154088-5
WHO Environmental Health Criteria, No. 28, Acrylonitrile
World Health Organization
1983, 125p, $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
107-13-1	ACRYLONITRILE

ISBN 92-4-154089-3
WHO Environmental Health Criteria, No. 29, 2,4-Dichlorophenoxyacetic Acid (2,4-D)
World Health Organization
1984, 151p, $7.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
94-75-7	DICHLOROPHENOXYACETICACID,2,4-

ISBN 92-4-154091-5
WHO Environmental Health Criteria, No. 31, Tetrachloroethylene
World Health Organization
1984, 48p, $3.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
127-18-4	TETRACHLOROETHYLENE

ISBN 92-4-154092-3
WHO Environmental Health Criteria, No. 32, Methylene Chloride
World Health Organization
1984, 55p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
75-09-2	METHYLENE CHLORIDE

ISBN 92-4-154093-1
WHO Environmental Health Criteria, No. 33, Epichlorohydrin
World Health Organization
1984, 51p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
106-89-8	EPICHLOROHYDRIN

ISBN 92-4-154094-X
WHO Environmental Health Criteria, No. 34, Chlordane
World Health Organization
1984, 82p, $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
12789-03-6	CHLORDANE TECHNICAL MIXTURE

ISBN 92-4-154096-6
WHO Environmental Health Criteria, No. 36, Fluorine and Fluorides
World Health Organization
1984, 136p, $6.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
16984-48-8	FLUORIDES
7782-41-4	FLUORINE

ISBN 92-4-154098-2
WHO Environmental Health Criteria, No. 38, Heptachlor
World Health Organization
1984, 81p, $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
76-44-8	HEPTACHLOR

ISBN 92-4-154099-0
WHO Environmental Health Criteria, No. 39, Paraquat and Diquat
World Health Organization
1984, 181p, $8.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
4685-14-7	DIMETHYL-4,4-BIPYRIDINIUM,1,1-
85-00-7	DIQUOT

ISBN 92-4-154180-6
WHO Environmental Health Criteria, No. 40, Endosulfan
World Health Organization
1984, 62p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
115-29-7	ENDOSULFAN

ISBN 92-4-154181-4
WHO Environmental Health Criteria, No. 41, Quintozene
World Health Organization
1984, 38p, $3.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
82-68-8 PENTACHLORONITROBENZENE

ISBN 92-4-154182-2
WHO Environmental Health Criteria, No. 42, Tecnazene
World Health Organization
1984, 23p, $3.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
117-18-0 TETRACHLORONITROBENZENE,2,3,5,6-

ISBN 92-4-154183-0
WHO Environmental Health Criteria, No. 43, Chlordecone
World Health Organization
1984, 57p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
143-50-0	KEPONE

ISBN 92-4-154184-9
WHO Environmental Health Criteria, No. 44, Mirex
World Health Organization
1984, 70p, $4.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
2385-85-5	MIREX

ISBN 92-4-154185-7
WHO Environmental Health Criteria, No. 45, Camphechlor
World Health Organization
1984, 66p, $4.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
8001-35-2 TOXAPHENE

ISBN 92-4-154186-5
WHO Environmental Health Criteria, No. 46, Guidelines for the Study of Genetic Effects in Human Populations
World Health Organization
1985, 126p, $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-170069-6
Estimating Human Exposure to Air Pollutants, WHO Offset Publication, No. 69
World Health Organization
1982, 59 p., $4.00

Abstract Not Available

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-832-0113-2
IARC Scientific Publication No. 13. Environmental Pollution and Carcinogenic Risks
International Agency for Research on Cancer
1976, 473 p., $25.00

Abstract: Summary contents: Atmospheric pollution - Water pollution - Occupational pollution - Radiation pollution - Identification of carcinogens - Assessment of carcinogenic risk - Measuring potential carcinogens in the environment - Industrial and legal aspects.

CL-CARCIN	CARCINOGENS
CL-RAD	RADIATION
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RA	RISK ASSESSMENT

ISBN 92-832-1116-2
IARC Scientific Publication No. 16. Air Pollution and Cancer in Man
International Agency for Research on Cancer
1977, 331 p., $45.00

Abstract: Describes in detail studies on car exhaust fumes and their carcinogenicity, air pollution monitoring systems and the registration of data concerning cancers possibly produced by air pollution. A very full discussion of the epidemiology of lung cancer covers several countries in Europe and the USA.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RA	RISK ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

ISBN 92-832-1119-7
IARC Scientific Publication No. 19. Environmental Aspects of N-Nitroso Compounds
International Agency for Research on Cancer
1978, 566 p., $50.00

Abstract: Contains sections on methods of analysis, chemistry and formation, occurrence and precursors, biology, and safety. Discussion of the papers presented at the meeting enabled expert groups to draw up guidelines for future work.

CL-N-NITRO	N-NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1122-7
IARC Scientific Publications No. 22. Environmental Carcinogens. Selected Methods of Analysis. Volume 2. Methods for the Measurement of Vinyl Cloride in Poly (Vinyl Chloride), Air, Water and Foodstuffs
International Agency for Research on Cancer
1978, 142 p., $37.50

Abstract: Reviews the available data on the carcinogenicity of vinyl chloride, presents the monitoring requirements for industry, and reviews the techniques of measurement and monitoring. Eight methods for the determination of vinyl chloride are described in detail and presented in the format recommended by the International Organization for Standardization. Methods for the preparation of calibration standards are also given.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
TM	TECHNICAL MONITORING
75-01-4	VINYL CHLORIDE

ISBN 92-832-1130-8
IARC Scientific Publications No. 30. Biological Effects of Mineral Fibres
International Agency for Research on Cancer
1979, $30.00

Abstract: Volume 1. Dust physics and chemistry; pathology of asbestos-- related disease; experimental pathology (in vivo studies) related to asbestos and other mineral fibres; experimental pathology (in vitro studies) related to asbestos and other mineral fibres (1980) pages 1-494, 117 figures. Volume 2: Clinical and radiological observations on asbestos-related pathology; epidemiology of asbestos-related disease, scientific basis for environmental control of fibres; general discussion on asbestos; dust physics and chemistry of other minerals fibres; clinical and radiological observations on mineral-fibre-related pathology; epidemiology of groups exposed to other mineral fibres; general discussion on other mineral fibres (1980) pages 496-1007, 47 figures.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1332-21-4	ASBESTOS

ISBN 92-832-1140-5
IARC Scientific Publications No. 40. Environmental Carcinogens. Selected Methods of Analysis. Volume 4. Some Aromatic Amines and Azo Dyes in the General and Industrial Environment
International Agency for Research on Cancer
1981, 347 p., $30.00

Abstract: Although originally exposure to aromatic amines was mainly a problem of industrial hygiene, there is now a general environmental problem from exposure to such amines as phenacetin, certain dyes, pigments and food pyrolysates, and the relevant analytical procedures are included in this volume. Since aromatic amines can also be formed by in vivo metabolic processes, two chapters are devoted to these biological aspects.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
62-44-2	ACETOPHENETIDIDE,P-

ISBN 92-832-1141-3
IARC Scientific Publications No. 41. N-Nitroso Compounds: Occurrence and Biological Effects
International Agency for Research on Cancer
1982, 755 p., $55.00

Abstract Not Available

CL-N-NITRO	N-NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1146-4
IARC Scientific Publications No. 46. Directory of On-Going Research in Cancer Epidemiology 1982
International Agency for Research on Cancer
1982, 722 p., $20.00

Abstract Not Available

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RA	RISK ASSESSMENT

ISBN 92-832-1204-5
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 4: Some Aromatic Amines, Hydrazine and Related Substances, N-Nitroso Compounds and Miscellaneous Alkylating Agents
International Agency for Research on Cancer
1974, 286 p., $9.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-AMINE	AMINES
CL-N-NITRO	N-NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
302-01-2	HYDRAZINE

ISBN 92-832-1205-3
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 5: Some Organochlorine Pesticides
International Agency for Research on Cancer
1974, 241 p., $9.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PEST PESTICIDES
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1207-X
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 7: Some Anti-Thyroid and Related Substances, Nitrofurans and Industrial Chemicals
International Agency for Research on Cancer
1974, 326 p., $16.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1208-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 8: Some Aromatic Azo Compounds
International Agency for Research on Cancer
1975, 357 p., $18.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1209-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 9: Some Aziridines, N-, S- & O-mustards and Selenium
International Agency for Research on Cancer
1975, 268 p., $13.50

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
151-56-4	ETHYLENEIMINE
7782-49-2	SELENIUM COMPOUNDS, AS SE

ISBN 92-832-1210-X
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 10: Some Naturally Occurring Substances
International Agency for Research on Cancer
1976, 353 p., $19.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1211-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 11: Cadmium, Nickel, Some Epoxides, Miscellaneous Industrial Chemicals and General Considerations on Volatile Anaesthetics
International Agency for Research on Cancer
1976, 306 p., $17.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
7440-02-0 NICKEL
7440-43-9 CADMIUM

ISBN 92-832-1212-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 12: Some Carbamates, Thiocarbamates and Carbazides
International Agency for Research on Cancer
1976, 282 p., $17.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
497-18-7 CARBOHYDRAZIDE

ISBN 92-832-1213-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 13: Some Miscellaneous Pharmaceutical Substances
International Agency for Research on Cancer
1977, 255 p., $15.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1214-2
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 14: Asbestos
International Agency for Research on Cancer
1977, 106 p., $7.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1332-21-4	ASBESTOS

ISBN 92-832-1215-0
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 15: Some Fumigants, the Herbicides, 2,4-D and 2,4,5-T, Chlorinated Dibenzodioxins and Miscellaneous Industrial Chemicals
International Agency for Research on Cancer
1977, 354 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
93-76-5	TRICHLOROPHENOXYACETICACID,2,4,5-
94-75-7	DICHLOROPHENOXYACETICACID,2,4-

ISBN 92-832-1216-9
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 16: Some Aromatic Amines and Related Nitro Compounds - Hair Dyes, Colouring Agents and Miscellaneous Industrial Chemicals
International Agency for Research on Cancer
1978, 400 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-AMINE AMINES
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1217-7
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 17: Some N-Nitroso Compounds
International Agency for Research on Cancer
1978, 365 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-N-NITRO N-NITROSO COMPOUNDS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1218-5
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 18: Polychlorinated Biphenyls and Polybrominated Biphenyls
International Agency for Research on Cancer
1978, 140 p., $10.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PCB	POLYCHLORINATED BIPHENYLS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS
59536-65-1	POLYBROMINATED BIPHENYLS

ISBN 92-832-1219-3
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 19: Some Monomers, Plastics and Synthetic Elastomers, and Acrolein
International Agency for Research on Cancer
1979, 513 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
107-02-8	ACROLEIN

ISBN 92-832-1220-7
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 20: Some Halogenated Hydrocarbons
International Agency for Research on Cancer
1979, 609 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1223-1
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 23: Some Metals and Metallic Compounds
International Agency for Research on Cancer
1980, 438 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-METAL METALLIC COMPOUNDS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1224-X
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 24: Some Pharmaceutical Drugs
International Agency for Research on Cancer
1980, 337 p., $20.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1225-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 25: Wood, Leather and Some Associated Industries
International Agency for Research on Cancer
1981, 412 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
24	LUMBER AND WOOD PRODUCTS
31	LEATHER AND LEATHER PRODUCTS

ISBN 92-832-1226-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 26: Some Antineoplastic and Immunosuppressive Agents
International Agency for Research on Cancer
1981, 411 p., $31.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1227-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 27: Some Aromatic Amines, Anthraquinones and Nitroso Compounds, and Inorganic Fluorides used in Drinking-Water and Dental Preparation
International Agency for Research on Cancer
1982, 341 p., $20.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-AMINE	AMINES
CL-N-NITRO	N-NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
16984-48-8	FLUORIDES
84-65-1	ANTHRAQUINONES

ISBN 92-832-1228-2
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 28: The Rubber Industry
International Agency for Research on Cancer
1982, 486 p., $35.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS

ISBN 92-832-1229-0
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 29: Some Industrial Chemicals and Dyestuffs
International Agency for Research on Cancer
1982, 416 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1230-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 30: Miscellaneous Pesticides
International Agency for Research on Cancer
1983, 424 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1232-0
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 32: Polynuclear Aromatic Compounds, Part 1. Chemical, Environmental and Experimental Data
International Agency for Research on Cancer
1983, 477p, $40.00

Abstract: These monographs summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-CARCIN	CARCINOGENS
CL-POM	POLYCYCLIC ORGANIC MATTER
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1233-9
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 33: Polynuclear Aromatic Compounds, Part 2. Carbon Blacks, Mineral Oils and Some Nitroarenes
International Agency for Research on Cancer
1984, 245p, $25.00

Abstract: These monographs summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1333-86-4	CARBON BLACK

ISBN 92-832-1234-7
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 34: Polynuclear Aromatic Compounds, Part 3. Industrial Exposures in Aluminum Production, Coal Gasification, Coke Production, and Iron and Steel Founding
International Agency for Research on Cancer
1984, 219p, $24.00

Abstract: These monographs summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-CARCIN	CARCINOGENS
CL-POM	POLYCYCLIC ORGANIC MATTER
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
33	PRIMARY METAL INDUSTRIES

ISBN 92-832-1309-2
Information Bulletin on the Survey of Chemicals Being Tested for Carcinogenicity, Number 9
International Agency for Research on Cancer
1981, 289 p., $20.50

Abstract: This Bulletin results from a project the objective of which is to survey on-going research on long-term carcinogenicity testing throughout the world. The major aims are to avoid unnecessary duplication of research, to increase communication among scientists, and to make a census of available research facilities as well as of chemicals which are being tested. The Bulletin lists: name of chemical under investigation; use category; animal species, strains and number of animals; route of exposure and dose levels; stage of experiments; principal investigator(s); and references to published reports of completed studies.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1310-6
Information Bulletin on the Survey of Chemicals Being Tested for Carcinogenicity, Number 10
International Agency for Research on Cancer
1982, 320 p., $21.00

Abstract: This Bulletin results from a project the objective of which is to survey on-going research on long-term carcinogenicity testing throughout the world. The major aims are to avoid unnecessary duplication of research, to increase communication among scientists, and to make a census of available research facilities as well as of chemicals which are being tested. The Bulletin lists: name of chemical under investigation; use category; animal species, strains and number of animals; route of exposure and dose levels; stage of experiments; principal investigator(s); and references to published reports of completed studies.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1311-4
Information Bulletin on the Survey of Chemicals Being Tested for Carcinogenicity, Number 11
International Agency for Research on Cancer
1984, 365p, $25.00

Abstract: This Bulletin results from a project to survey on-going research on long-term carcinogenicity testing throughout the world. The major aims are to avoid unnecessary duplication of research, to increase communication among scientists, and to make a census of available research facilities as well as of chemicals which are being tested. The Bulletin lists: name of chemical under investigation, animal species, strains and number of animals; route of exposure and dose levels; stage of experiments; principal investigator(s); and references to published reports of completed studies.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1402-1
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 1: Chemicals and Industrial Processes Associated with Cancer in Humans (IARC Monographs 1-20)
International Agency for Research on Cancer
1979, 71 p., $5.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-ORGANIC	ORGANIC COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1404-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 2: Long-Term and Short-Term Screening Assays for Carcinogens: A Critical Appraisal
International Agency for Research on Cancer
1980, 426 p., $20.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1405-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 3: Cross Index of Synonyms and Trade Names in Volume 1 to 26
International Agency for Research on Cancer
1982, 199 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1406-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 4: Chemicals, Industrial Processes and Industries associated with Cancer in Humans (IARC Monographs, Volumes 1 to 29)
International Agency for Research on Cancer
1982, 292 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-890-1244-7
Indoor Air Pollutants: Exposure and Health Effects. Report on a WHO Meeting (Nordlingen, Federal Republic of Germany, 1982)
World Health Organization
1983, 42p, EURO Reports and Studies No. 78, $2.00

Abstract: This report discusses a meeting of the WHO Working Group on Assessment and Monitoring of Exposure to Indoor Pollutants. The purpose of the meeting was to review the results of prior work in the field of indoor air quality, as well as work currently in progress or planned, in order to evaluate the extent to which such work is likely to provide early estimates of actual population exposures and the extent of the health impacts that can be associated with them. The working group also considered the relative contributions and limitations of laboratory characterizations of sources of pollutants; model predictions of such concentrations in actual spaces; field monitoring of pollutant concentrations; personal monitoring; and health effect determinations in the laboratory and in the field. Finally, the group discussed the need for and benefit of simultaneous studies in a number of countries and the coordination of such studies in time, approach and design, bearing in mind that the priorities of the component disciplines involved would not necessarily coincide with those needed to arrive at a rapid assessment of the overall health impact of indoor air pollution in its present form.

CL-IAP	INDOOR AIR POLLUTANTS
EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-9020-196-7
Toxicological Appraisal of Halogenated Aromatic Compounds following Groundwater Pollution, Report of a WHO Working Group
World Health Organization
1980, 58 p., $4.00

Abstract Not Available

CL-PNA	POLYNUCLEAR AROMATICS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

NIOSH 79-142
Current Intelligence Bulletin 32 - Arsine (Arsenic Hydride) Poisoning in the Workplace
National Institute of Occupational Safety and Health
1979, 13 p., AVAIL NIOSH

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7784-42-1	ARSINE

NIOSH 81-106
Health Hazard Alert: OSHA/NIOSH - Benzidine-,o-Tolidine-, and o-Dianisidine-Based Dyes
National Institute of Occupational Safety and Health
1981, 21 p., AVAIL NIOSH

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
119-90-4	DIMETHOXYBENZIDINE,3,3'-
119-93-7	DIMETHYLBENZIDINE,3,3'-
92-87-5	BENZIDINE

NIOSH 81-130
Current Intelligence Bulletin 35 - Ethylene Oxide
National Institute of Occupational Safety and Health
1981, 22 p., AVAIL NIOSH

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
75-21-8	ETHYLENE OXIDE

NIOSH 84-104
Current Intelligence Bulletin 40 - 2,3,7,8 Tetrachlorodibenzo-p-dioxin (TCDD, "dioxin")
National Institute of Occupational Safety and Health
1983, AVAIL NIOSH

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

NIOSH 84-105
Current Intelligence Bulletin 41 - 1,3 Butadiene
National Institute of Occupational Safety and Health
1983, AVAIL NIOSH

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-99-0	BUTADIENE,1,3-

PB PENDING
National Air Toxics Information Clearinghouse: NATICH Data Base Report on State and Local Agency Air Toxics Activities
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Sep 85, 336p, EPA-450/5-86-006

Abstract: The purpose of this report is to disseminate information provided to the NATICH data base by state and local air agencies on their air toxics activities. This computer-generated report supersedes manually prepared interim reports published in September 1984 and March 1985. It both updates and extends the information in the first two reports and contains information received up until July 1985. This report includes a listing of state and local agencies that have provided information to the Clearinghouse, air toxics contacts, regulatory program information, acceptable ambient concentrations and standards, pollutant research information, methods development activities, permitting information, source testing information, and ambient monitoring information.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB-202 459
Background Information for Proposed New-Source Performance Standards: Steam Generators, Incinerators, Portland Cement Plants, Nitric Acid Plants, Sulfuric Acid Plants
EPA, Research Triangle Park, NC, OAP
Aug 71, 61p, APTD-0711, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
14	NONMETALLIC MINERALS, EXCEPT FUELS
142	CRUSHED AND BROKEN STONE
1422	CRUSHED AND BROKEN LIMESTONE
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-204 876
Background Information-Proposed National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, Mercury
EPA, Research Triangle Park, NC, OAP
Dec 71, 30p, APTD-0753, PC A03/MF A01

Abstract: For asbestos, beryllium, and mercury, proposed national air pollution standards are summarized. Reviews are presented for the following: the effects on health; the nature of the problem; the development of the proposed standard; and, its economic impact. A report on atmospheric dispersion estimates is appended.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

PB-221 736
Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text
EPA, Research Triangle Park, NC, OAP
Jun 73, 79p, APTD-1352A, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
2952	ASPHALT FELTS AND COATINGS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS

PB-222 802
Background Information on Development of National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAP
Mar 73, 104p, APTD-1503, PC A06/MF A01

Abstract: The document provides a detailed discussion of the statements made in the preamble to the National Emission Standards for Hazardous Air Pollutants (asbestos, beryllium, and mercury). The first section of this report covering general provisions discusses: Applicability of the standards; Approval of construction or modification; Notification of startup; Waiver of compliance; Source reporting; Source sampling and analytical methods. The three remaining sections discuss the following areas for each of the three pollutants, asbestos, beryllium and mercury: (1) health effects; (2) development of the standard; (3) evaluation of comments; (4) environmental impact.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

PB-228 152
Criteria for a Recommended Standard: Occupational Exposure to Sulfur Dioxide
National Institute of Occupational Safety and Health
1974, 121 p., PC A06/MF A01
NIOSH PUB No: 74-111, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7446-09-5	SULFUR DIOXIDE

PB-229 660
Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data.
EPA, Research Triangle Park, NC, OAP
Jun 73, 71p, APTD-1352B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
295	PAV.NG AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
2952	ASPHALT FELTS AND COATINGS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS

PB-231 601
Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Feb 74, 148p, APTD-1352C, EPA-450/2-74-003, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
2952	ASPHALT FELTS AND COATINGS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS

PB-232 976
Environmental Surveys of Aluminum Reduction Plants
National Institute of Occupational Safety and Health
1974, 49 p., PC A03/MF A01
NIOSH PUB No: 74-101, UNAVAIL NIOSH

Abstract: The purpose of this report is to summarize the environmental surveys of four aluminum reduction plants in the Eastern United States, including pre-baked, horizontal pin Soderberg and vertical pin Soderberg operations. The major emphasis of the envionmental studies was to determine the extent of worker exposures to potential carcinogenic compounds found in coal tar and petroleum pitch volatiles; however, exposures to total airborne dust, airborne fluorides, carbon monoxide, sulfur dioxide, ammonia and noise also were documented. The report presents a description of aluminum reduction processing and associated worker activities for the three production types that were surveyed, the environmental sampling procedures utilized, a summary of sampling results and conclusions that can be drawn from the surveys.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
630-08-0	CARBON MONOXIDE
7664-41-7	AMMONIA
8007-45-2	COAL TAR PITCH VOLATILES

PB-233 098
Criteria for a Recommended Standard: Occupational Exposure to Sulfuric Acid
National Institute of Occupational Safety and Health
1974, 90 p., PC A05/MF A01
NIOSH PUB No: 74-128, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7664-93-9	SULFURIC ACID

PB-237 169
Background Information on National Emission Standards for Hazardous Air pollutants - Proposed Amendments to Standards for Asbestos and Mercury
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 150p, EPA-450/2-74-009A, PC A07/MF A01

Abstract: Rationale for amendments promulgated April 6, 1973, and an evaluation of their economic and environmental impacts are presented. Report covers asbestos pollution related to manufacturing, demolition and renovation, fabrication and disposal of wastes, and mercury emissions from sludge incineration and drying facilities. Optional air cleaning methods for compliance with asbestos standards, chemical stabilization of waste disposal sites, and estimation of allowable mercury emissions from sewage sludge incineration facilities are discussed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
1521	SINGLE-FAMILY HOUSING CONSTRUCTION
1522	RESIDENTIAL CONSTRUCTION, NEC
153	OPERATIVE BUILDERS
1531	OPERATIVE BUILDERS
154	NONRESIDENTIAL BUILDING CONSTRUCTION
1541	INDUSTRIAL BUILDINGS AND WAREHOUSES
1542	NONRESIDENTIAL CONSTRUCTION, NEC
1542	NONRESIDENTIAL CONSTRUCTION, NEC
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

PB-237 182/1
Medical and Biologic Effects of Environmental Pollutants: Vanadium
National Academy of Sciences
1974, 123 p., MF A01 (Paper copy not available from NTIS)
ISBN 0-309-02218-5, $ 5.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-62-2	VANADIUM

PB-237 183/9
Medical and Biologic Effects of Environmental Pollutants: Chromium
National Academy of Sciences
1974, 164 p., MF A01 (Paper copy not available from NTIS)
ISBN 0-309-022217-7, $6.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA HEALTH ASSESSMENT
NAS NATIONAL ACADEMY OF SCIENCES
7440-47-3 CHROMIUM

PB-237 184/7
Effects of Fluorides in Animals
National Academy of Sciences
1974, 70 p., MF A01 (Paper copy not available from NTIS)
ISBN 0-309-02219-3, $5.75

Abstract: The report reviews and evaluates information on the effects of fluorides to animals, emphasizing the adverse effects of excessive amounts as related to structural and functional responses. Methods for minimizing toxicity are presented, as are recommended avenues for future investigation. Discussed are the sources of fluorides, essentiality and metabolism of fluoride, fluoride toxicosis and factors influencing it, and the tolerance of various animal species. On the basis of experimental data, fluoride tolerances for various species of animals are provided in tabular form. A dental classification chart to aid in diagnoising fluoride toxicosis in animals has been compiled, and several other tables and figures accompany the text.

HA HEALTH ASSESSMENT
NAS NATIONAL ACADEMY OF SCIENCES
16984-48-8 FLUORIDES

PB-237 411
Background Information for Standards of Performance: Electric Submerged Arc Furnaces for Production of Ferroalloys. Volume I: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 163p, EPA-450/2-74-018A, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-237 421
Background Information for Standards of Performance: Coal Preparation Plants, Volume I: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 59p, EPA-450/2-74-021A, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
11	ANTHRACITE MINING
12	BITUMINOUS COAL AND LIGNITE MINING
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3532	MINING MACHINERY

PB-237 606
Background Information for Standards of Performance: Phosphate Fertilizer Industry. Volume 1. Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct. 74, 140p, EPA-450/2-74-019A, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS

PB-237 607
Background Information for Standards of Performance: Phosphate Fertilizer Industry. Volume 2: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 63p, EPA-450/2-74-019B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS

PB-237 612
Background Information for Standards of Performance: Primary Aluminum Industry. Volume I: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 123p, EPA-450/2-74-020A, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
3334	PRIMARY ALUMINUM
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
3353	ALUMINUM SHEET, PLATE, AND FOIL
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3361	ALUMINUM FOUNDRIES

PB-237 613
Background Information for Standards of Performance: Primary Aluminum Industry. Volume II: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 123p, EPA-450/2-74-020B, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
3353	ALUMINUM SHEET, PLATE, AND FOIL
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3361	ALUMINUM FOUNDRIES

PB-237 696
Background Information for Standards of Performance: Coal Preparation Plants. Volume 2. Summary and Test Data
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 39p, EPA-450/2-74-021B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
11	ANTHRACITE MINING
12	BITUMINOUS COAL AND LIGNITE MINING
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3532	MINING MACHINERY

PB-237 832
Background Information for New Source Performance Standards: Primary Copper, Zinc, and Lead Smelters. Volume 1: Proposed Standards.
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 612p, EPA-450/2-74-002A, PC A99/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3332	PRIMARY LEAD
3333	PRIMARY ZINC
7439-92-1	LEAD POWDER
7440-50-8	COPPER
7440-66-6	ZINC

PB-237 840
Background Information for Standards for Performance: Electric Arc Furnaces in the Steel Industry, Volume 1: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 170p, EPA-450/2-74-017A, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-237 841
Background Information for Standards of Performance: Electric Arc Furnaces in the Steel Industry. Volume 2: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 44p, EPA-450/2-74-017B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-238 077
Background Information for Standards of Performance: Electric Submerged Arc Furnaces for Production of Ferroalloys. Volume 2: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 60p, EPA-450/2-74-018B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-243 423
Source Assessment: Prioritization of Air Pollution from Industrial Surface Coating Operations
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
T. W. Hughes, et al
Feb 75, 311p, EPA-650/2-75-019A, PC A14/MF A01

Abstract: Industrial surface coating operations, excluding those associated with automobile and architectural painting, are used in the coating of sheet, strip, coil, paper and paperboard, in treating fabrics, and in finishing appliances, machinery and furniture. These coating operations produce hydrocarbon emissions, primarily solvents and resins, and particulate emissions. Background information and technical data were collected and analyzed in this study in order to establish a data base for prioritizing atmospheric emissions from industrial surface coating operations, excluding automobile and architectural painting. This special project was undertaken to provide information on solvent evaporation processes required by the EPA for use in establishing New Source Performance Standards for industrial surface coating operations.

CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
26	PAPER AND ALLIED PRODUCTS
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS

PB-246 692
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Fluoride
National Institute of Occupational Safety and Health
1975, 191 p., PC A10/MF A01
NIOSH PUB No: 76-103, UNAVAIL NIOSH
GPO No: 017-033-00118-9, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
16984-48-8 FLUORIDES

PB-246 693
Criteria for a Recommended Standard: Occupational Exposure to Zinc Oxide
National Institute of Occupational Safety and Health
1975, 87 p., PC A05/MF A01
NIOSH PUB No: 76-104, UNAVAIL NIOSH
GPO No: 017-033-00109-0, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working0lVQ%5e. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1314-13-2 ZINC OXIDE, FUME

PB-246 694
Criteria for a Recommended Standard: Occpuational Exposure to Sodium Hydroxide
National Institute of Occupational Safety and Health
1975, 93 p., PC A06/MF A01
NIOSH PUB No: 76-105, UNAVAIL NIOSH
GPO No: 017-033-00110-3, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1310-73-2	SODIUM HYDROXIDE

PB-246 695
Criteria for a Recommended Standard: Occupational Exposure to Chloroform
National Institute of Occupational Safety and Health
1974, 130 p., PC A07/MF A01
NIOSH PUB No: 75-114, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
67-66-3	CHLOROFORM

PB-246 699
Criteria for a Recommended Standard: Occupational Exposure to Ammonia
National Institute of Occupational Safety and Health
1976, 107p., PC A06/MF A01
NIOSH PUB No: 74-136, UNAVAIL NIOSH
GPO No: 017-033-00036-1, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7664-41-7 AMMONIA

PB-246 700
Criteria for a Recommended Standard: Occupational Exposure to Benzene
National Institute of Occupational Safety and Health
1974, 137 p., PC A07/MF A01
NIOSH PUB No: 74-137, UNAVAIL NIOSH
GPO No: 017-033-00038-7, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
71-43-2 BENZENE

PB-246 701
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Arsenic
National Institute of Occupational Safety and Health
1975, 141 p., PC A07/MF A01
NIOSH PUB No: 75-149, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-38-2 ARSENIC

PB-246 702
Criteria for a Recommended Standard: Occupational Exposure to Xylene
National Institute of Occupational Safety and Health
1975, 101 p., PC A06/MF A01
NIOSH PUB No: 75-168, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1330-20-7 XYLENE

PB-248 595
Criteria for a Recommended Standard: Occupational Exposure to Chromium VI
National Institute of Occupational Safety and Health
1975, 200 p., PC A10/MF A01
NIOSH PUB No: 76-129, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-47-3	CHROMIUM

PB-249 703
Standard Support and Environmental Impact Statement: Emission Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS
Oct 75, 536p, EPA-450/2-75-009A, PC A23/MF A01

Abstract: A national emission standard for vinyl chloride emitted from ethylene dichloride-vinyl chloride and polyvinyl chloride plants is being proposed under the authority of section 112 of the Clear Air Act. Vinyl chloride has been implicated as the causal agent of angiosarcoma and other serious disorders, both carcinogenic and noncarcinogenic, in people with occupational exposure and in animals with experimental exposure to vinyl chloride. Reasonable extrapolations from these findings cause concern that vinyl chloride may cuase or contribute to the same or similar disorders at present ambient air levels. The purpose of the proposed standard is to minimize vinyl chloride emissions from all known process and fugitive emission sources in ethylene dichloride-vinyl chloride and polyvinyl chloride plants to the level attainable with best available control technology. This would have the effect of furthering the protection of public health by minimizing the health risks to the people living in the vicinity of theses plants and to any additional people who are exposed as a result of new construction. This is estimated to have the effect of reducing emissions from a typical ethylene dichloride-vinyl chloride plant by approximately 94 percent and from a typical polyvinyl chloride plant by approximately 95 percent.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
75-01-4	VINYL CHLORIDE

PB-250 424
Criteria for a Recommended Standard: Occupational Exposure to Carbon Tetrachloride
National Institute of Occupational Safety and Health
1975, 155 p., PC A08/MF A01
NIOSH PUB No: 76-133, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
56-23-5	CARBON TETRACHLORIDE

PB-250 667
Background Information for Standards of Performance: Primary Aluminum Industry. Volume 3: Supplemental Information
EPA, Research Triangle Park, NC, OAQPS
Jan 76, 52p, EPA-450/2-74-020C, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
3353	ALUMINUM SHEET, PLATE, AND FOIL
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3361	ALUMINUM FOUNDRIES

PB-251 618
Background Information for Standards of Performance: Coal Preparation Plants. Volume 3. Supplemental Information
EPA, Research Triangle Park, NC, OAQPS
Jan 76, 62p, EPA-450/2-74-021C, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
11	ANTHRACITE MINING
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3532	MINING MACHINERY

PB-252 031
Background Information for Standards of Performance: Electric Submerged Arc Furnaces for Production of Ferroalloys. Volume 3: Supplemental Information
EPA, Research Triangle Park, NC, OAQPS
Apr 76, 112p, EPA-450/2-74-018C, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-252 356
Source Assessment: Flat Glass Manufacturing Plants
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. B. Reznik
Mar 76, 152p, EPA-600/2-76-032B, PC A08/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFATE	SULFATES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
3211	FLAT GLASS

PB-253 479
Source Assessment: Prioritization of Stationary Air Pollution Sources. Model Description
EPA, Research Triangle Park, N.C., IERL
Monsanto Research Corp.
E. C. Eimutis
Feb 76, 83p, EPA-600/2-76-032A, PC A05/MF A01

Abstract: The report describes a prioritization model for the rank-ordering of stationary air pollution sources. The source types were rank-ordered or prioritized by computing a relative environmental impact factor for each source type. A priority listing was developed for each of four categories: combustion, organic materials, inorganic materials, and open sources. The report also describes both the actual application of the model and the types of calculations that were performed depending upon the degree of input aggregation. The report also gives detailed examples of use, as well as results of sensitivity analyses, showing how the prioritization model responds to input changes.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-253 992
Source Assessment: Fertilizer Mixing Plants
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
G. D. Rawlings, R. B. Reznik,
Mar 76, 196p, EPA-600/2-76-032C, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SALTS	SALT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY
7664-41-7	AMMONIA
7723-14-0	PHOSPHOROUS (YELLOW)
7782-41-4	FLUORINE
7782-50-5	CHLORINE

PB-256 310
Source Assessment: Severity of Stationary Air Pollution Sources - A Simulation Approach
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
E. C. Eimutis, B. J. Holmes, L. B. Mote,
Jul 76, 133p, EPA-600/2-76/032E, PC A07/MF A01

Abstract: The report gives results of a study simulating the establishment of the severity of stationary air pollution sources. The potential environmental impact of an emission source can be determined from the source severity (the ground level concentration contribution of pollutants relative to some potentially hazardous concentration of the same species). The frequency distribution of the severity of well-documented source types can be examined deterministically. A statistical approach is required to simulate the frequency distri- bution of the severity of source types that are complex or involve a large number of emission points in order to ultimately assess such sources. A Monte Carlo simulation technique is described in this report, together with efficient algorithms for fitting the inverse Weibull, gamma, normal, and log-normal cumulative density functions. Significant correlation is demonstrated between deterministic and simulated severity results using coal-fired steam/electric utilities as an example.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-257 975
Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Petroleum Refinery Sulfur Recovery Plants
EPA, Research Triangle Park, NC, OAQPS
Sep 76, 200p, EPA-450/2-76-016A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB-258 007
Standard Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Sep 76, 386p, EPA-450/2-76-014A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-258 827
Standard Support and Environmental Impact Statement. Volume 2. Promulgated Emission Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS
Sep 76, 135p, EPA-450/2-75-009B, PC A07/MF A01

Abstract: A national emission standard for vinyl chloride emitted from ethylene dichloride-vinyl chloride and polyvinyl chloride plants is being promulgated under the authority of section 112 of the Clear Air Act. Vinyl chloride has been implicated as the causal agent of angiosarcoma and other serious disorders, both carcinogenic and non-carcinogenic, in people with occupational exposure and in animals with experimental exposure to vinyl chloride. Reasonable extrapolations from these findings cause concern that vinyl chloride may cause or contribute to the same or similar disorders at present ambient air levels. The purpose of the standard is minimize vinyl chloride emissions from all known process and fugitive emission sources in ethylene dichloride-vinyl chloride and polyvinyl chloride plants to the level attainable with best available control technology. This would minimize health risks to both the public as well as to people living near these plants. This is estimated to have the effect of reducing emissions from a typical ethylene dichloride-vinyl chloride plant by approximately 94 percent and from a typical polyvinyl chloride plant by approximately 95 percent. This document contains a summary of the public comments on the proposed standard and EPA's responses to them.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
75-01-4	VINYL CHLORIDE

PB-262 002
Source Assessment: Glass Container Manufacturing Plants
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J. R. Schorr
Oct 76, 146p, EPA-600/2-76-269, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFATE	SULFATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
7782-49-2	SELENIUM COMPOUNDS, AS SE

PB-264 018/3
Report on Carcinogenesis Bioassay of Chloroform
National Cancer Institute
Mar 76, 61p, DHEW/PUB/NIH-76-1279, PC A04/MF A01

Abstract: USP grade chloroform was bioassayed using both sexes of Osborne-Mendel rats and B6C3F1 mice. Two dose levels were administered by oral savage five times per week for 78 weeks. A decrease in survival rate and weight gain was evident for all treated groups. A significant increase in kidney epithelial tumors was observed in male rats. Highly significant increases in hepatocellular carcinoma were observed in both sexes of mice. Nodular hyperplasia of the liver was observed in many low dose male mice which had not developed hepatocellular carcinoma.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB-264 122/3
Carcinogenesis Bioassay of Trichloroethylene. CAS No. 79-01-6
National Cancer Institute
Feb 76, 215p, NCI-CG-TR-2, PC A10/MF A01

Abstract: Trichloroethylene (TCE) is a halogenated chemical used primarily as a solvent in industrial degreasing operations. Industrial grade TCE was bioassayed using both sexes of Osborne-Mendel rats and B6C3F1 mice. Two dose levels were administered. Animals were exposed to the compound by oral gavage 5 times per week for 78 weeks. A discussion of dose determination (maximum tolerated dose and time weighted average dose) is included. The results of the carcinogenesis test indicate that Trichloroethylene induced a hepatocellular carcinoma response in mice. There was an absence of a similar effect in rats, and reasons for this dissimilarity are discussed.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
79-01-6	TRICHLOROETHYLENE

PB-265 062
Final Guideline Document: Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants
EPA, Research Triangle Park, NC, OAQPS
Mar 77, 277p, EPA-450/2-77-005, PC A13/MF A01

Abstract: The document serves as a text to state agencies in the development of their gaseous fluoride emission regulations from existing phosphate fertilizer plants. Recommended emission units are suggested for five production facilities: wet-processes phosphoric acid, diammonium phosphate, superphosphoric acid, triple superphosphate, granular triple superphosphate production and storage. Information contained within includes data on the phosphate fertilizer industry and control technology, a discussion of the guideline emission limitations and the supporting data, and analyses of the environmental and economic impacts of the guideline limits.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS

PB-265 082/8
Bioassay of 1, 1, 1-Trichloroethane for Possible Carcinogenicity. CAS No. 71-55-6
National Cancer Institute
Jan 77, 72p, NCI-CG-TR-3, PC A04/MF A01

Abstract: A bioassay for the possible carcinogenicity of technical grade 1,1,1-trichloroethane was conducted using Osborne-Mendel rats and B6C3F1 mice. The 1,1,1-trichloroethane was administered orally by gavage in corn oil to 50 animals of each sex and species at two dose levels 5 days per week for 78 weeks. The rats received two doses of 1500 and 750 mg/kg which produced a moderate depression of body weight in the first year of the study. A yellow discoloration of lower abdominal fur, eye and nasal discharge and dyspnea were observed during the second year. Both male and female test animals exhibited early mortality. Surviving animals were killed at 117 weeks of age. In mice, the doses were increased twice and the time-weighted average doses were 5,616 and 2,807 mg/kg. There was a moderate depression of body weight throughout the study in both sexes and survival was significantly decreased. Neoplasms encountered in both the treated and control animals had been seen previously in untreated animals. The neoplasms were not believed to be attributable to 1,1,1-trichloroethane since no relationship was established between the dosage groups, species, sex, type of neoplasm or site of occurrence.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
71-55-6	TRICHLOROETHANE,1,1,1-

PB-265 479
Background Information for an Opacity Standard of Performance for Basic Oxygen Process Furnaces in Iron and Steel Plants
EPA, Research Triangle Park, NC, OAQPS
Mar 77, 66p, EPA-450/2-77-004, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB-266 213
Health Effects of Occupational Lead and Arsenic Exposure: A Symposium
National Institute of Occupational Safety and Health
1976, 356 p., PC A16/MF A01
NIOSH PUB No: 76-134, UNAVAIL NIOSH
GPO No: 017-033-00121-9, $9.00

Abstract: The report contains papers presented at a symposium to consider the impact of lead and arsenic on the workers' health, and to assist in establishing safe levels of these metals. Topics include: sources of lead and arsenic, and monitoring of workplace both environmentally and biologically; toxicology of lead and arsenic; epidemiology of arsenic and lead exposure, long-term effects, and community exposure studies; carcinogenic effects of arsenic; and problems in setting threshold limit values for arsenic.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7439-92-1	LEAD POWDER
7440-38-2	ARSENIC

PB-266 224
Industrial Process Profiles for Environmental Use: Chapter 5. Basic Petrochemicals Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. B. Parsons, C. M. Thompson, G. E. Wilkins
Jan 77, 155p, EPA-600/2-77-023E, PC A08/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
299	MISC. PETROLEUM AND COAL PRODUCTS
2999	PETROLEUM AND COAL PRODUCTS, NEC

PB-266 225
Industrial Process Profiles for Environmental Use: Chapter 8. Pesticides Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. B. Parsons, F. I. Hones
Jan 77, 240p, EPA-600/2-77-023H, PC A11/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB-266 226
Industrial Process Profiles for Environmental Use: Chapter 24. The Iron and Steel Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. Parsons, V. S. Katari, R. W. Gerstle
Feb 77, 209p, EPA-600/2-77-023X, PC A10/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB-266 230
Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Cyanide and Cyanide Salts
National Institute of Occupational Safety and Health
1976, 204 p., PC A10/MF A01
NIOSH PUB No: 77-108, UNAVAIL NIOSH
GPO No: 017-033-00163-4, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
143-33-9	CYANIDES
151-50-8	POTASSIUM CYANIDE
74-90-8	HYDROGEN CYANIDE

PB-266 274
Industrial Process Profiles for Environmental Use: Chapter 1. Introduction
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. Parsons, I. A. Jefcoat, P. W. Spaite
Jan 77, 21p, EPA-600/2-77-023A, PC A02/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB-266 367
Criteria for a Recommended Standards: Occupational Exposure to Chlorine
National Institute of Occupational Safety and Health
1977, 167 p., PC A08/MF A01
NIOSH PUB No: 76-170, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7782-50-5 CHLORINE

PB-266 495
Criteria for a Recommended Standard: Occupational Exposure to Phenol
National Institute of Occupational Safety and Health
1976, 179 p., PC A09/MF A01
NIOSH PUB No: 76-196, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
108-95-2	PHENOL

PB-266 583
Criteria for a Recommended Standard: Occupational Exposure to Tetrachloroethylene (Perchloroethylene)
National Institute of Occupational Safety and Health
1976, 157 p., PC A08/MF A01
NIOSH PUB No: 76-185, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
127-18-4	TETRACHLOROETHYLENE

PB-266 797
Source Assessment: Phthalic Anhydride (Air Emissions)
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. W. Serth, T. W. Hughes
Dec 76, 160p, EPA-600/2-76-032D, PC A08/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
85-44-9	PHTHALIC ANHYDRIDE

PB-266 942
Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Lime Manufacturing Plants
EPA, Research Triangle Park, NC, OAQPS
Apr 77, 282p, EPA-450/2-77-077A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB-267 068
Criteria for a Recommended Standard: Occupational Exposure to Acetylene
National Institute of Occupational Safety and Health
1976, 96 p., PC A05/MF A01
NIOSH PUB No: 76-195, UNAVAIL NIOSH
GPO No: 017-033-00175-8, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
74-86-2 ACETYLENE

PB-267 069
Criteria for a Recommended Standard: Occupational Exposure to 1,1,1-Trichloroethane (Methyl Chloroform)
National Institute of Occupational Safety and Health
1976, 191 p., PC A09/MF A01
NIOSH PUB No: 76-184, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
71-55-6 TRICHLOROETHANE,1,1,1-

PB-267 070
Criteria for a Recommended Standard: Occupational Exposure to Malathion
National Institute of Occupational Safety and Health
1976, 196 p., PC A09/MF A01
NIOSH PUB No: 76-205, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
121-75-5	MALATHION

PB-267 071
Criteria for a Recommended Standard: Occupational Exposure to Allyl Chloride
National Institute of Occupational Safety and Health
1976, 99 p., PC A05/MF A01
NIOSH PUB No: 76-204, UNAVAIL NIOSH
GPO No: 017-033-00186-3, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
107-05-1	CHLOROPROPENE,3-

PB-267 514
Criteria for a Recommended Standard: Occupational Exposure to Phosgene
National Institute of Occupational Safety and Health
1976, 140 p., PC A07/MF A01
NIOSH PUB No: 76-137, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
75-44-5	PHOSGENE

PB-267 610
Standards Support and Environmental Impact Statement Volume I: Proposed Standards of Performance for Lignite-Fired Steam Generators
EPA, Research Triangle Park, NC, OAQPS
Dec 76, 192p, EPA-450/2-76-030A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-270 240
Source Assessment: Agricultural Opening Burning, State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
C. T. Chi, D. L. Zanders
Jul 77, 77p, EPA-600/2-77-107A, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
01	AGRICULTURAL PRODUCTION-CROPS

PB-270 282
Source Assessment: Beef Cattle Feedlots
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. A. Peters, T. R. Blackwood
Jun 77, 114p, EPA-600/2-77-107, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-GYPSUM	GYPSUM
CL-SULFIDE	SULFIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
02	AGRICULTURAL PRODUCTION-LIVESTOCK
021	LIVESTOCK, EXC. DAIRY, POULTRY, ETC.
0211	BEEF CATTLE FEEDLOTS
7664-41-7	AMMONIA
7722-64-7	PERMANGANIC ACID

PB-270 550
Source Assessment: Noncriteria Pollutant Emissions
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
E. C. Eimutis, R. P. Quill
Jul 77, 116p, EPA-600/2-77-107E, PC A06/MF A01

Abstract: The report lists stationary sources that emit each of 320 noncriteria pollutants. It also indicates quantities of such emissions. The list was prepared, using a computerized data base established for emissions of air pollutants from approximately 600 stationary source types in the combustion, organic materials, inorganic materials, and open source categories. (A source type is defined as a group of emission sources which have the same process and emission characteristics.)

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-271 486
Source Assessment: Mechanical Harvesting of Cotton - State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. W. Synder, T. R. Blackwood
Jul 77, 121p, EPA-600/2-77-107D, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0722	CROP HARVESTING

PB-271 697
Source Assessment: Harvesting of Grain - State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. A. Wachter, T. R. Blackwood
Jul 77, 99p, EPA-600/2-77-107F, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0722	CROP HARVESTING
7631-86-9	SILICA

PB-271 969
Source Assessment: Acrylonitrile Manufacture (Air Emissions)
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
T. W. Hughes, D. A. Horn
Sep 77, 123p, EPA-600/2-77-107J, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB-271 984
Source Assessment: Ammonium Nitrate Production
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. J. Search, R. B. Reznik
Sep 77, 80p, EPA-600/2-77-1071, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
7664-41-7	AMMONIA

PB-271 986
Source Assessment: Overview and Prioritization of Emissions from Textile Manufacturing
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. A. Wachter, S. R. Archer, T. R. Blackwood
Sep 77, 142p, EPA-600/2-77-107H, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS

PB-272 422
Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Stationary Gas Turbines
EPA, Research Triangle Park, NC, OAQPS
Sep 77, 593p, EPA-450/2-77-017A, PC A25/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-272 621
Source Assessment: Defoliation of Cotton, State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. A. Peters, T. R. Blackwood
Jul 77, 134p, EPA-600/2-77-107G, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
01	AGRICULTURAL PRODUCTION-CROPS
013	FIELD CROPS, EXCEPT CASH GRAINS
0131	COTTON
4685-14-7	DIMETHYL-4,4-BIPYRIDINIUM,1,1-
7775-09-9	SODIUM CHLORATE
7778-39-4	ARSENIC ACID
78-48-8	PHOSPHOROTRIDIOIC ACID

PB-272 940/8
Bioassay of Tetrachloroethylene for Possible Carcinogenicity. CAS No. 127-18-4
National Cancer Institute
Aug 77, 92p, NCI-CG-TR-13, PC A05/MF A01

Abstract: A bioassay for the possible carcinogenicity of U.S.P. grade tetrachloroethylene was conducted using Osborne-Mendel rats and B6C3F1 mice. The compound was administered in corn oil by gavage at two concentrations for 78 weeks to groups of 50 animals of each species and sex. Twenty animals of each species and sex were placed on tests as vehicle controls (receiving corn oil only) and 20 animals of each species and sex served as untreated controls. No significant increased incidence of neoplastic lesions was observed in the treated rats but toxicity of the compound was noted in terms of toxic nephropathy. Mortality of rats was dose-related, 50% of the high dose males dying by week 44 and 50% of the high dose females dying by week 66. In male and female mice, there was a statistically significant increase of hepatocellular carcinoma for each dosed group compared to each control group with a highly significant positive association between increased dosage and elevated tumor incidence. Toxic nephropathy was also noted in treated mice. Under the conditions of this study, tetrachloroethylene is a liver carcinogen in B6C3F1 mice of both sexes. The bioassay of Osborne-Mendel rats is considered to be an inadequate test because of early deaths among the treated animals. (Portions of this document are not fully legible).

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
127-18-4	TETRACHLOROETHYLENE

PB-273 068
Source Assessment: Carbon Black Manufacture
EPA, Research Triangle Park, N.C., IERL
Monsanto Research Corp.
R. W. Serth, T. W. Hughes
Oct 77, 248p, EPA-600/2-77-107K, PC A11/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1333-86-4	CARBON BLACK
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2895	CARBON BLACK
7783-06-4	HYDROGEN SULFIDE

PB-273 649
Industrial Process Profiles for Environmental Use: Chapter 3. Petroleum Refining Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
J. C. Dickerman, et al.
Jan 77, 148p, EPA-600/2-77-023C, PC A07/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
8002-05-9	PETROLEUM DISTILLATES

PB-273 788
Source Assessment: Pressed and Blown Glass Manufacturing Plants
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J. R. Schorr, et al.
Jan 77, 143p, EPA-600/2-77-005, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFATE	SULFATES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
16984-48-8	FLUORIDES
32	STONE, CLAY, AND GLASS PRODUCTS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
3229	PRESSED AND BLOWN GLASS, NEC
7782-49-2	SELENIUM COMPOUNDS, AS SE

PB-273 795
Special Occupational Hazard Review and Control Recommendations for Nickel Carbonyl
National Institute of Occupational Safety and Health
1977, 45 p., PC A03/MF A01
NIOSH PUB No: 77-184, UNAVAIL NIOSH
GPO No: 017-033-00228-2, $4.50

Abstract: The known hazards of nickel carbonyl are reviewed and recommendations are made for control measures in occupational environments. Human effects resulting from accidental exposure to nickel carbonyl include pulmonary edema, interstitial pneumonitis, reduced lung capacity, heart disorders, liver enlargement, and in severe exposure cases, death. In animal carcinogenicity studies, rats developed lung tumors from both long term and acute exposure to nickel carbonyl vapor. Human epidemiologic data are insufficient to either confirm or deny a causal relationship between the increased incidence of lung and nasal cancers and nickel carbonyl exposure in nickel refinery workers. The one part per billion nickel carbonyl standard should protect workers from any carcinogenic and other adverse health effects associated with nickel carbonyl exposure. Methods for detecting nickel carbonyl in the air are described.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
13463-39-3	NICKEL CARBONYL
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC

PB-273 801
Criteria for a Recommended Standard: Occupational Exposure to Carbaryl
National Institute of Occupational Safety and Health
1976, 204 p., PC A10/MF A01
NIOSH PUB No: 77-107, UNAVAIL NIOSH
GPO No: 017-033-00196-1, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
63-25-2	CARBARYL

PB-273 802
Criteria for a Recommended Standard: Occupational Exposure to 1,1,2,2-Tetrachloroethane
National Institute of Occupational Safety and Health
1976, 154 p., PC A08/MF A01
NIOSH PUB No: 77-121, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
79-34-5	TETRACHLOROETHANE,1,1,2,2-

PB-273 805
Criteria for a Recommended Standard: Occupational Exposure to Formaldehyde
National Institute of Occupational Safety and Health
1976, 177 p., PC A09/MF A01
NIOSH PUB No: 77-126, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
50-00-0	FORMALDEHYDE

PB-273 806
Criteria for a Recommended Standard: Occupational Exposure to Methyl Alcohol
National Institute of Occupational Safety and Health
1976, 148 p., PC A07/MF A01
NIOSH PUB No: 76-148, UNAVAIL NIOSH
GPO No: 017-033-00191-0, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
67-56-1	METHANOL

PB-273 817
Criteria for a Recommended Standard: Occupational Exposure to Alkanes
National Institute of Occupational Safety and Health
1977, 138 p., PC A07/MF A01
NIOSH PUB No: 77-151, UNAVAIL NIOSH
GPO No: 017-033-00213-4, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB-273 819
Criteria for a Recommended Standard: *Occupational Exposure to Benzoyl* Peroxide
National Institute of Occupational Safety and Health
1977, 128 p., PC A07/MF A01
NIOSH PUB No: 77-166, UNAVAIL NIOSH
GPO No: 017-033-00221-5, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
94-36-0	BENZOYL PEROXIDE

PB-273 871
Criteria for a Recommended Standard: Occupational Exposure to Acrylamide
National Institute of Occupational Safety and Health
1976, 137 p., PC A04/MF A01
NIOSH PUB No: 77-112, UNAVAIL NIOSH
GPO No: 017-033-00185-5, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
79-06-1	ACRYLAMIDE

PB-273 873
Criteria for a Recommended Standard: Occupational Exposure to Isopropyl Alcohol
National Institute of Occupational Safety and Health
1976, 131 p., PC A07/MF A01
NIOSH PUB No: 76-142, UNAVAIL NIOSH
GPO No: 017-033-00165-1, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
67-63-0 ISOPROPANOL

PB-273 965
Criteria for a Recommended Standard: Occupational Exposure to Asbestos
National Institute of Occupational Safety and Health
1976, 100 p., PC A05/MF A01
NIOSH PUB No: 77-169, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1332-21-4 ASBESTOS

PB-274 085
Final Guideline Document: Control of Sulfuric Acid Mist Emissions from Existing Sulfuric Acid Production Units
EPA, Research Triangle Park, NC, OAQPS
Sep 77 189p, EPA-450/2-77-019, PC A09/MF A01

Abstract: The U. S. Environmental Protection Agency is required under 40 CFR Part 60 to publish a guideline document for development of State emission standards after promulgating any standard of performance limiting emissions of such a designated pollutant--sulfuric acid mist--from new and modified sulfuric acid production units were promulgated on December 23, 1971, including the following information: (1) Emission guidelines and times for compliance; (2) A brief description of the sulfuric acid industry, and the nature and source of acid mist emissions; (3) Information regarding the effects of acid mist on health and welfare; and (4) Assessments of the environmental, economic, and energy impacts of the emission guideline.

CL-ACID	ACIDIC COMPOUNDS
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

PB-274 191
Criteria for a Recommended Standard: Occupational Exposure to Methyl Parathion
National Institute of Occupational Safety and Health
1976, 189 p., PC A09/MF A01
NIOSH PUB No: 77-106, UNAVAIL NIOSH
GPO No: 017-033-00202-9, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
298-00-0	METHYL PARATHION

PB-274 192
Criteria for a Recommended Standard: Occupational Exposure to Parathion
National Institute of Occupational Safety and Health
1976, 102 p., PC A06/MF A01
NIOSH PUB No: 76-190, UNAVAIL NIOSH
GPO No: 017-033-00195-2, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
56-38-2	PARATHION

PB-274 193
A Cross-Sectional Epidemiologic Survey of Vinyl Chloride Workers
National Institute of Occupational Safety and Health
1977, 50 p., PC A03/MF A01
NIOSH PUB No: 77-177, UNAVAIL NIOSH

Abstract: The extent to which vinyl chloride monomer induces clinical detectable abnormalities among workers occupationally exposed was investigated during a cross-sectional medical survey at a chemical plant which has a polyvinyl chloride polymerization operation, a polyvinyl chloride fabrication operation, and a rubber tire production operation. The survey of 433 predominantly white male employees, divided into four vinyl chloride exposure groups (never, light, heavy, former), determined the prevalence of illnesses and abnormalities based on data gathered by interview, medical examination, blood and pulmonary function tests, liver scans, and hand and chest x-rays. Age-adjusted analyses indicated that hepatomegaly, centeral nervous system symptoms, diastolic hypertension and spouses' fetal wastage (the latter two statistically significant) were more prevalent among past or present vinyl chloride exposed workers than among controls. There was no excess of respiratory system problems, acroosteolysis, Raynaud's phenomenon, and chromosome aberrations as compared with industrial worker controls.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES
75-01-4	VINYL CHLORIDE
9002-86-2	POLYVINYL CHLORIDE LATEX

PB-274 195
Criteria for a Recommended Standard: Occupational Exposure to Fibrous Glass
National Institute of Occupational Safety and Health
1977, 203 p., PC A10/MF A01
NIOSH PUB No: 77-152, AVAIL NIOSH
GPO No: 017-033-00214-2, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB-274 196
Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Sulfide
National Institute of Occupational Safety and Health
1977, 161p., PC A08/MF A01
NIOSH PUB No: 77-158, AVAIL NIOSH
GPO No: 017-033-00217-7, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7783-06-4 HYDROGEN SULFIDE

PB-274 199
Criteria for a Recommended Standard: Occupational Exposure to Carbon Disulfide
National Institute of Occupational Safety and Health
1977, 198 p., PC A09/MF A01
NIOSH PUB No: 77-156, UNAVAIL NIOSH
GPO No: 017-033-00216-9, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
75-15-0	CARBON DISULFIDE

PB-274 201
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Nickel
National Institute of Occupational Safety and Health
1977, 293 p., PC A13/MF A01
NIOSH PUB No: 77-164, UNAVAIL NIOSH
GPO No: 017-033-00219-3, $8.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-02-0	NICKEL

PB-274 237
Criteria for a Recommended Standard: Occupational Exposure to Cadmium
National Institute of Occupational Safety and Health
1976, 97 p., PC A05/MF A01
NIOSH PUB No: 76-192, UNAVAIL NIOSH
GPO No: 017-033-00206-1, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-43-9 CADMIUM

PB-274 238
Criteria for a Recommended Standard: Occupational Exposure to Waste Anesthetic Gases and Vapors
National Institute of Occupational Safety and Health
1977, 204 p., PC A10/MF A01
NIOSH PUB No: 77-140, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB-274 367
Source Assessment: Urea Manufacture
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. J. Search, R. B. Reznik
Nov 77, 94p, EPA-600/2-77/107L, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
57-13-6	UREA

PB-274 727
Criteria for a Recommended Standard: Occupational Exposure to Decomposition Products of Fluorocarbon Polymers
National Institute of Occupational Safety and Health
1977, 123 p., PC A06/MF A01
NIOSH PUB No: 77-193, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB-274 747
Criteria for a Recommended Standard: Occupational Exposure to Boron Trifluoride
National Institute of Occupational Safety and Health
1976, 95p., PC A05/MF A01
NIOSH PUB No: 77-122, AVAIL NIOSH
GPO No: 017-033-00178-2, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7637-07-2	BORON TRIFLUORIDE

PB-274 764
Behavioral and Neurological Effects of Carbon Disulfide
National Institute of Occupational Safety and Health
1976, 168 p., PC A08/MF A01
NIOSH PUB No. 77-128, UNAVAIL NIOSH
GPO No: 017-033-00189-8, $6.50

Abstract: A behavioral/neuorological battery of tests was applied to a sample of workers occupationally exposed to carbon disulfide, together with neurological examination, and medical evaluation. Workers were also given psychometric tests of reaction time, coordination, visual search, short-term memory, and visual acuity. One hundred workers engaged in the manufacture of viscose rayon constituted the carbon disulfide-exposed group. Since ambient air levels of carbon disulfide could not be obtained within the viscose rayon plant, estimates of workers' exposure to carbon disulfide were based on detailed work history interviews with participants and results from an iodine azide test for urine metabolites of carbon disulfide. According to the total neurologic score for assessment of peripheral neuropathy, 13% of the carbon disulfide-exposed workers showed a probable or definite polyneuropathy. After correcting for age effects, neurologic indicators or ulnar nerve damage correlated significantly with indices of carbon disulfide-exposure, as did behavioral tests of reaction time, dexterity, rate of visual search, and perceptual organization.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
22	TEXTILE MILL PRODUCTS
222	WEAVING MILLS, SYNTHETICS
2221	WEAVING MILLS, SYNTHETICS
28	CHEMICALS AND ALLIED PRODUCTS
75-15-0	CARBON DISULFIDE

PB-274 766
Criteria for a Recommended Standard: Occupational Exposure to Organotin Compounds
National Institute of Occupational Safety and Health
1976, 196 p., PC A09/MF A01
NIOSH PUB No: 77-115, UNAVAIL NIOSH
GPO No: 017-033-00203-7, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-31-5	TIN, AS SN

PB-274 777
Criteria for a Recommended Standard: Occupational Exposure to Chloroprene
National Institute of Occupational Safety and Health
1977, 184 p., PC A09/MF A01
NIOSH PUB No: 77-210, UNAVAIL NIOSH
GPO No: 017-033-00239-8, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
126-99-8	CHLOROBUTADIENE,2-,1,3-

PB-274 789
A Study of Methyl Methacrylate Exposures and Employee Health
National Institute of Occupational Safety and Health
1976, 61 p., PC A04/MF A01
NIOSH PUB No: 77-119, UNAVAIL NIOSH
GPO No: 017-033-00170-7, $4.75

Abstract: Ninety-one exposed and forty-three nonexposed workers are evaluated at five plants manufacturing polymethyl methacrylate sheets. Significant acute effects devleoping over the work shift are not detected as measured by symptomatology, blood pressure, and pulse rate. Chronic effects are sought for in past symptomatology, blood pressure, respiratory function testing, hemoglobin and white blood count, urinalysis, and blood chemistry. Data suggest that effects may occur in the higher concentration exposure groups with regard to serum glucose, and blood urea nitrogen, cholesterol, albumin, and total bilirubin values. Also, possible alterations are suggested in skin and nervous system symptomatology, urinalysis findings, and serum triglycerides. Extensive air sampling reveals mean 8-hour time-weighted average exposure by job category ranging from 4 to 49 ppm, for the workers studies, at the individual plants.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
30	RUBBER AND MISC. PLASTICS PRODUCTS
80-62-6	METHACRYLIC ACID

PB-274 795
Special Occupational Hazard Review With Control Recommendations - Use of Ethylene Oxide as a Sterilant in Medical Facilities
National Institute of Occupational Safety and Health
1977, 68 p., PC A04/MF A01
NIOSH PUB No: 77-200, UNAVAIL NIOSH

Abstract: Based on the results of recent tests for mutagenesis, NIOSH recommends that exposure to ethylene oxide be controlled so that workers are not exposed to a concentration greater than 75 ppm determined during a 15 minute sampling period, as a ceiling occupational exposure limit and in addition, with the provision that the time-weighed average concentration limit of 50 ppm for a workday not be exceeded. Where the use of the compound is to be continued, improved techniques of exhausting the gas from the sterilizer, the aerator and the sterilized items need to be implemented. Included is a summary of airborne ethylene oxide concentrations measured within health care facilities as part of a field survey. NIOSH estimates that there are in excess of 10,000 ehtylene oxide sterilizers used in U.S. health care facilities, and that approximately 75,000 workers are potentially exposed to the gas in those facilities.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
75-21-8	ETHYLENE OXIDE
80	HEALTH SERVICES
807	MEDICAL AND DENTAL LABORATORIES
8071	MEDICAL LABORATORIES

PB-274 810
Criteria for a Recommended Standard: Occupational Exposure to Dioxane
National Institute of Occupational Safety and Health
1977, 203 p., PC A10/MF A01
NIOSH PUB No: 77-226, UNAVAIL NIOSH
GPO No: 017-033-00254-1, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
123-91-1	DIOXANE,1,4-

PB-275 525
Compilation of Air Pollutant Emission Factors. Third Edition. Parts A and B (including Supplements 1 through 7)
EPA, Research Triangle Park, NC, OAQPS
Aug 77, 511p, AP-42, PC A22/MF A01

Abstract: Emission data obtained from source tests, material balance studies, engineering estimates, etc., have been compiled for use by those responsible for conducting air pollution emission inventories. Emission factors in this document cover most of the common emission categories. Individual AP-42 supplements are available from NTIS, as follows below. In September 1985, an update package to the Third Edition of AP-42 was published and is available from Whittmel M. Joyner, EPA:OAQPS. Future supplements will be available from the U.S. Government Printing Office. For information on the Fourth Edition of AP-42, see GPO Nos. 055-000-00251-7 and 055-000-00252-5.

AP-42 Supplement Number	NTIS Order Number	Price Code	AP-42 Supplement Number	NTIS Order Number	Price Code
8	PB-288 905	A06	12	PB82-101213	A09
9	PB-295 614	A06	13	PB83-126557	A06
10	PB80-199045	A07	14	PB83-250720	A08
11	PB81-170814	A05	15	PB84-199744	A05

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB-275 594
Criteria for a Recommended Standard: Occupational Exposure to Tungsten and Cemented Tungsten Carbide
National Institute of Occupational Safety and Health
1977, 182 p., PC A09/MF A01
NIOSH PUB No: 77-227, AVAIL NIOSH
GPO No: 017-033-00268-1, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-33-7	TUNGSTEN AND COMPOUNDS, AS W

PB-276 621
Criteria for a Recommended Standard: Occupational Exposure to Ethylene Dibromide
National Institute of Occupational Safety and Health
1977, 216 p., PC A10/MF A01
NIOSH PUB No: 77-221, AVAIL NIOSH
GPO No: 017-033-00251-7, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-93-4	ETHYLENE DIBROMIDE

PB-276 718
Source Assessment: Synthetic Ammonia Production
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
G. D. Rawlings, R. B. Reznik
Nov 77, 85p, EPA-600/2-77-107M, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
7664-41-7	AMMONIA

PB-276 731
Source Assessment: Asphalt Hot Mix
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
Z. S. Khan, T. W. Hughes
Dec 77, 196p, EPA-600/2-77-107N, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ALDEHYD	ALDEHYDES
CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
SA	SOURCE ASSESSMENT
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS

PB-276 745
Methods for Determining the Polychlorinated Biphenyl Emissions from Incineration and Capacitor and Transformer Filling Plants
EPA, Research Triangle Park, NC, EMSL
Midwest Research Inst.
L. Haile, E. Baladi
Nov 77, 94p, EPA-600/4-77-048, PC A05/MF A01

Abstract: Described are methods to measure the polychlorinated biphenyl (PCB) emissions from the stacks of municipal waste, industrial waste, and sewage sludge incinerators and from capacitor and transformer filling plants. The PCB emissions from the incineration plants are collected by impingement in water and adsorption on Florisil. The samples are extracted with hexane, concentrated through evaporation of the solvent, perchlorinated, and the polychlorinated biphenyl content measured as the decachlorinated isomer using a gas chromatograph equipped with a flame ionization detector. The PCB emissions from the capacitor and transformer filling plants are collected directly on Florisil, extracted with hexane and quantified against the appropriate Aroclor using a gas chromatograph. The methods were developed from laboratory studies and field tested at nine incineration plants and two transformer filling plants.

SS/AM	SOURCE SAMP/AMB MON
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
36	ELECTRIC AND ELECTRONIC EQUIPMENT
367	ELECTRONIC COMPONENTS AND ACCESSORIES
3675	ELECTRONIC CAPACITORS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB-276 849
Criteria for a Recommended Standard: Occupational Exposure to Polychlorinated Biphenyls
National Institute of Occupational Safety and Health
1977, 232 p., PC A11/MF A01
NIOSH PUB No: 77-225, AVAIL NIOSH
GPO No: 017-033-00265-7, $7.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-PCB	POLYCHLORINATED BIPHENYLS
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB-276 917
Criteria for a Recommended Standard: Occupational Exposure to Coal Tar Products
National Institute of Occupational Safety and Health
1977, 197 p., PC A09/MF A01
NIOSH PUB No: 78-107, AVAIL NIOSH
GPO No: 017-033-00273-8, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
8007-45-2	COAL TAR PITCH VOLATILES

PB-277 333
Criteria for a Recommended Standard: Occupational Exposure to Asphalt Fumes
National Institute of Occupational Safety and Health
1977, 152 p., PC A08/MF A01
NIOSH PUB No: 78-106, UNAVAIL NIOSH
GPO No: 017-033-00272-0, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
8052-42-4	ASPHALT (PETROLEUM) FUMES

PB-277 464/2
Medical and Biologic Effects of Environmental Pollutants: Platinum-Group Metals
National Academy of Sciences
1977, 232 p., PC A07/MF A01
ISBN 0-309-02640-7, $11.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

CL-METAL	METALLIC COMPOUNDS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7439-88-5	IRIDIUM
7440-04-2	OSMIUM
7440-05-3	PALLADIUM
7440-06-4	PLATINUM
7440-16-6	RHODIUM METAL, FUME AND DUST, AS RH
7440-18-8	RUTHENIUM

PB-278 135
Draft Guideline Document: Control of TRS Emissions from Existing Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Jan 78, 210p, EPA-450/2-78-003A, PC A10/MF A01

Abstract: Guidelines to aid the states in their preparation of plans for the control of emissions of total reduced sulfur (TRS) from existing kraft pulp mills are being proposed under the authority of section 111(d) of the Clean Air Act. TRS emissions from kraft pulp mills are extremely odorous, and there are numerous instances of poorly controlled mills creating public odor problems. Adoptions of the proposed emission guidelines by the states would result in an overall reduction of about 80 percent in nationwide TRS emissions from kraft pulp mills.

CL-TRS	TOTAL REDUCED SULFUR
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-278 160
Standards Support and Environmental Impact Statement Volume II: Promulgated Standards of Performance for Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Dec 77, 50p, EPA-450/2-76-014B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-278 163
Standards Support and Environmental Impact Statement Volume II: Promulgated Standards of Performance for Petroleum Refinery Sulfur Recovery Plants
EPA, Research Triangle Park, NC, OAQPS
Jan 78, 39p, EPA-450/2-76-016B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB-278 777
Source Assessment: Polychloroprene. State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. A. Horn, D. R. Tierney, T. W. Hughes
Dec 77, 97p, EPA-600/2-77-1070, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
108-88-3	TOLUENE
126-99-8	CHLOROBUTADIENE,2-,1,3-
14807-96-6	TALC
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
7647-01-0	HYDROGEN CHLORIDE

PB-278 816
Destroying Chemical Wastes in Commercial Scale Incinerators
EPA, Washington, DC, OSW
TRW Defense and Space Systems Group
D. Ackerman, et al.
1978, 130p, EPA-530/SW-155C, PC A07/MF A01

Abstract: The report summarizes the results of a Phase II test program demonstrating the effectiveness of thermal destruction of industrial wastes in commercial scale facilities. Phase I was a study effort to select and match suitable wastes and destruction facilities, and to develop a set of detailed facility test plans. Phase II evaluated the environmental, technical, and economic feasibility of thermally destroying fourteen selected industrial wastes in seven different existing commercial scale processing facilities. Results indicated that each of the wastes tested can be thermally destroyed at high efficiencies. Separate detailed reports published for each facility test series conducted and the two volume Phase I report are listed in the references.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-42-5	STYRENE
108-95-2	PHENOL
11097-69-1	AROCLOR 1254
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
71-43-2	BENZENE
74-85-1	ETHYLENE
77-47-4	HEXACHLOROCYCLOPENTADIENE
80-62-6	METHACRYLIC ACID
9002-86-2	POLYVINYL CHLORIDE LATEX
98-95-3	NITROBENZENE

PB-279 008
Standards Support and Environmental Impact Statement Volume 2. Promulgated Standards of Performance for Lignite-Fired Steam Generators
EPA, Research Triangle Park, NC, OAQPS
Nov 77, 34p, EPA-450/2-76-030B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
496	STEAM SUPPLY
4961	STEAM SUPPLY

PB-279 171
Source Assessment: Pesticide Manufacturing Air Emissions - Overview and Prioritization
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
S. R. Archer, W. R. McCurley, G. D. Rawlings
Mar 78, 153p, EPA-600/2-78-004D, PC A08/MF A01

Abstract: This report is an overview of the pesticide manufacturing industry and prioritizes 80 major pesticides based on their potential environmental burden from an air pollution standpoint. Production of synthetic organic pesticides was about 640,000 metric tons in 1974. Thirty-seven major synthetic organic pesticides, those with annual production of 4540 or more tons, accounted for 74% of the market. Elemental chlorine is common to most pesticides, but other raw materials include hydrogen cyanide, carbon disulfide, phosgene, phosphorus pentasulfide, hexachloro-cyclopentadiene, amines, and concentrated acids and caustics. Air pollution aspects of the pesticide manufacturing industry are essentially without quantitative data. For some plants, the pollution caused by loss of active ingredients is less significant than that caused by unreacted by-products. Evaporation from holding ponds and lagoons may also be an emission source, although quantitative data is scarce. Emissions emanate from various equipment units and enter the atmosphere as both the active ingredient and as raw materials, intermediates, and by-prodeucts. Air emission control devices include baghouses, cyclone separators, electrostatic precipitators, incinerators, and gas scrubbers. Estimated production of synthetic organic pesticide in 1985 is 806,000 metric tons.

CL-ACID	ACIDIC COMPOUNDS
CL-AMINE	AMINES
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
74-90-8	HYDROGEN CYANIDE
75-15-0	CARBON DISULFIDE
75-44-5	PHOSGENE
77-47-4	HEXACHLOROCYCLOPENTADIENE
7782-50-5	CHLORINE

PB-279 305/7
Halocarbons: Environmental Effects of Chlorofluoromethane Release
National Academy of Sciences
1976, 125 p., PC MF A01 (Paper copy not available from NTIS)
ISBN 0-309-02529-X, $5.75

Abstract: The focus of the volume is on the appropriateness of measures that selectively limit the uses of the Freon 11 and Freon 12 chlorofluoromethanes (CFMS) rather than ban their use altogether. It provides a cohesive explanation of various phenomena in the stratosphere, the fates of Freon 11 and Freon 12, and the nature of the control problem regarding these CFMS. The effects on health and nonhuman biological systems are assessed in detail, with special attention given to sun exposure and skin cancer. The effects of CFMS on climate also are considered.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
593-70-4	CHLOROFLUOROMETHANE
75-69-4	FLUOROTRICHLOROMETHANE
75-71-8	DICHLORODIFLUOROMETHANE

PB-280 024
Source Assessment: Cotton Gins
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
G. D. Rawlings, R. B. Reznik
Jan 78, 82p, EPA-600/2-78-004A, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emisisons from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
01	AGRICULTURAL PRODUCTION-CROPS
013	FIELD CROPS, EXCEPT CASH GRAINS
0131	COTTON
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0724	COTTON GINNING

PB-280 118
Burning Waste Chlorinated Hydrocarbons in a Cement Kiln
EPA, Washington, D.C., OSW
Environmental Protection Service, Montreal
L.D. McDonald, et al.
Jan 78, 221p, EPA-530/SW-147C, PC A10/MF A01

Abstract: An experimental program was carried out in 1975/76 at the St. Lawrence Cement Co., Mississauga, Ontario in which waste chlorinated hydrocarbons, containing up to about 46 weight percent chlorine, were burned in a rotary cement kiln. Materials burned included mixtures of ethylene dichloride, chlorotoluene and up to approximately 50 percent polychlorinated biphenyls (PCB). These materials were destroyed in the cement kiln with at least 99.98 percent efficiency in all cases. Emissions of high molecular weight chlorinated hydrocarbons, dichloromethane, chloroform and carbon tetrachloride, were found in the emissions in the part per billion or lower range. The quantity of precipitator dust requiring disposal, as well as emissions of particulate matter, increased during the test. A reduction in fossil fuels used while burning chlorinated hydrocarbons was noted.

CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
106-43-4	CHLOROTOLUENE,P-
107-06-2	ETHYLENE DICHLORIDE
11097-69-1	AROCLOR 1254
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC
95-49-8	CHLOROTOLUENE,O-

PB-280 289/0
Kepone/Mirex/Hexachlorocyclopentadiene: An Environmental Assessment
National Academy of Sciences
1978, 73 p., PC A05/MF A01
ISBN 0-309-02766-7, $7.25

Abstract: This report's assessment of the scientific and technical knowledge about the effects of Kepone, Mirex, and Hex as environmental pollutants is based primarily on two literature surveys prepared for EPA's Office of Research and Development by Battelle Columbus Laboratories and the Stanford Research Institute. The principal findings and research needs arising from the Panel's assessment are summarized. Documentation for the findings can be found in the body of the report as noted parenthetically after each finding. The list of research needs identifies areas where more knowledge is needed before a truly comprehensive assessment of the effects of Kepone, Mirex, and Hex can be made.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
143-50-0	KEPONE
2385-85-5	MIREX
77-47-4	HEXACHLOROCYCLOPENTADIENE

PB-280 726
Source Assessment: Rail Tank Car, Tank Truck, and Drum Cleaning, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. E. Earley, K. M. Tackett, T. R. Blackwood
Apr 78, 69p, EPA-600/2-78-004G, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
34	FABRICATED METAL PRODUCTS
341	METAL CANS AND SHIPPING CONTAINERS
3412	METAL BARRELS, DRUMS, AND PAILS
40	RAILROAD TRANSPORTATION
401	RAILROADS
4011	RAILROADS, LINE-HAUL OPERATING

PB-280 756
Source Assessment: Major Barium Chemicals
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
R. B. Reznik, H. D. Troy, Jr.
Mar 78, 154p, EPA-600/2-78-004B, PC A08/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7440-39-3	BARIUM

PB-280 926
Source Assessment: Plastics Processing, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. W. Hughes, R. F. Boland, G. M. Rinaldi
Mar 78, 106p, EPA-600/2-78-004C, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB-281 422
Source Assessment: Crushed Limestone, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
P. K. Chalekode, T. R. Blackwood, S. R. Archer
Apr 78, 65p, EPA-600/2-78-004E, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14808-60-7	QUARTZ (SILICA DUST)
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME
60676-86-0	SILICA
7631-86-9	SILICA

PB-281 423
Source Assessment: Rubber Processing, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
C. T. Chi, et al.
Mar 78, 135p, EPA-600/2-78-004J, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-MINDUST	MINERAL DUSTS
CL-RESIN	RESINS
CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-42-5	STYRENE
106-99-0	BUTADIENE,1,3-
1314-13-2	ZINC OXIDE, FUME
1333-86-4	CARBON BLACK
30	RUBBER AND MISC. PLASTICS PRODUCTS

PB-281 477
Industrial Process Profiles for Environmental Use: Chapter 4. Carbon Black Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
R. W. Gerstle, et al.
Feb 77, 43p, EPA-600/2-77-023D, PC A03/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1333-86-4	CARBON BLACK
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2895	CARBON BLACK

PB-281 478
Industrial Process Profiles for Environmental Use: Chapter 6. The Industrial Organic Chemicals Industry
EPA, Cincinnati, OH, IERL
Research Triangle Institute
R. Liepins, et al.
Feb 77, 1014p, EPA-600/2-77-023F, PC A99/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB-281 479
Industrial Process Profiles for Environmental Use: Chapter 7. Organic Dyes and Pigments Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
T. R. Steadman, et al.
Feb 77, 362p, EPA-600/2-77-023G, PC A16/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
289	MISCELLANEOUS CHEMICAL PRODUCTS
2899	CHEMICAL PREPARATIONS, NEC

PB-281 480
Industrial Process Profiles for Environmental Use: Chapter 9. The Synthetic Rubber Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
J. Parr, T. B. Parsons, N. P. Phillips
Feb 77, 97p, EPA-600/2-77-0231, PC A05/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER

PB-281 481
Industrial Process Profiles for Environmental Use: Chapter 11. The Synthetic Fiber Industry
Radian Corp.
J. L. Parr
Feb 77, 58p, EPA-600/2-77-023K, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2823	CELLULOSIC MAN-MADE FIBERS
2824	ORGANIC FIBERS, NONCELLULOSIC

PB-281 482
Industrial Process Profiles for Environmental Use: Chapter 15. Brine and Evaporite Chemicals Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, et al.
Feb 77, 324p, EPA-600/2-77-023O, PC A14/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC

PB-281 483
Industrial Process Profiles for Environmental Use: Chapter 16. The Fluorocarbon-Hydrogen Fluoride Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
H. E. Doorenbus, T. Parsons
Feb 77, 119p, EPA-600/2-77-023P, PC A06/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-
7664-39-3	HYDROGEN FLUORIDE

PB-281 484
Industrial Process Profiles for Environmental Use: Chapter 17. The Gypsum and Wallboard Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, B. P. Shepherd, T. Parsons
Feb 77, 52p, EPA-600/2-77-023Q, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-GYPSUM	GYPSUM
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3275	GYPSUM PRODUCTS

PB-281 485
Industrial Process Profiles for Environmental Use: Chapter 18. The Lime Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
A. C. Doumas, et al.
Feb 77, 57p, EPA-600/2-77-023R, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB-281 486
Industrial Process Profiles for Environmental Use: Chapter 19. The Clay Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
J. T. Reding, et al.
Feb 77, 69p, EPA-600/2-77-023S, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
3251	BRICK AND STRUCTURAL CLAY TILE
329	MISC. NONMETALLIC MINERAL PRODUCTS
3295	MINERALS, GROUND OR TREATED

PB-281 487
Industrial Process Profiles for Environmental Use: Chapter 20. The Mica Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
J. T. Reding, et al.
Feb 77, 40p, EPA-600/2-77-023T, PC A03/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	DIMENSION STONE
1411	DIMENSION STONE
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3295	MINERALS, GROUND OR TREATED
3299	NONMETALLIC MINERAL PRODUCTS, NEC

PB-281 488
Industrial Process Profiles for Environmental Use: Chapter 21. The Cement Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, et al.
Feb 77, 52p, EPA-600/2-77-023U, PC A04/MF 101

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2891	ADHESIVES AND SEALANTS
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC
325	STRUCTURAL CLAY PRODUCTS
3255	CLAY REFRACTORIES
329	MISC. NONMETALLIC MINERAL PRODUCTS
3297	NONCLAY REFRACTORIES

PB-281 489
Industrial Process Profiles for Environmental Use: Chapter 22. The Phosphate Rock and Basic Fertilizer Materials Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, et al.
Feb 77, 212p, EPA-600/2-77-023V, PC A10/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY

PB-281 490
Industrial Process Profiles for Environmental Use: Chapter 23. Sulfur, Sulfur Oxides and Sulfuric Acid
EPA, Cincinnati, OH, IERL
Radian Corp.
R. W. Gerstle, et al.
Feb 77, 75p, EPA-600/2-77-023W, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID
7704-34-9	SULFUR

PB-281 491
Industrial Process Profiles for Environmental Use: Chapter 25. Primary Aluminum Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
T. Parsons
Feb 77, 46p, EPA-600/2-77-023Y, PC A03/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB-281 492
Industrial Process Profiles for Environmental Use: Chapter 26. Titanium Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
V. S. Katari, T. W. Devitt, T. B. Parsons
Feb 77, 67p, EPA-600/2-77-023Z, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING
3356	NONFERROUS ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3369	NONFERROUS FOUNDRIES, NEC
34	FABRICATED METAL PRODUCTS
346	METAL FORGINGS AND STAMPINGS
3463	NONFERROUS FORGINGS
7440-32-6	TITANIUM

PB-282 934
Source Assessment: Reclaiming of Waste Solvents, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. W. Hughes
Apr 78, 69p, EPA-600/2-78-004F, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB-283 051
Development of Information on Pesticides Manufacturing for Source Assessment
EPA, Research Triangle Park, NC, IERL
Midwest Research Institute
G. L. Kelso, et al.
May 78, 416p, EPA-600/2-78-100, PC A18/MF A01

Abstract: The report addresses the selection of relevant factors to gain perspective of the pollution potential from pesticides manufacturing and formulating operations and leads to the evolvement and defense of decision criteria for assessing the need for development of emissions control technology. Pesticides manufacturing and formulating operations are treated as materials input/ output systems, with chemical wastes identified for all media. From about 300 active pesticide ingredients, six candidates (representing five different chemical classifications) were chosen for detailed source assessment. The pesticide industry is characterized and quantified where possible, using available information. Data give a macroeconomic view of the pesticides manufacturing and formulating operations. Government regulatory pressure and posture is identified and assessed. Appendices contain much information on the pesticides industry from several viewpoints.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB-283 395
Source Assessment: Polyvinyl Chloride
EPA, Cincinati, OH, IERL
Monsanto Research Corp.
Z. S. Khan, T. W. Hughes
May 78, 107p, EPA-600/2-78-004I, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
75-01-4	VINYL CHLORIDE
9002-86-2	POLYVINYL CHLORIDE LATEX

PB-283 642
Environmental Assessment: At-Sea and Land-Based Incineration of Organochlorine Wastes
EPA, Research Triangle Park, NC, IERL
TRW, Inc.
S.F. Paige, et al.
Apr 78, 116p, EPA-600/2-78-087, PC A06/MF A01

Abstract: The report provides a generalized description of at-sea and land-based incineration of organochlorine wastes and an assessment of their corresponding impacts. The data base for at-sea incineration was obtained during a series of burns, between April 1974 and March 1977. Data describing land-based incineration were obtained from a review of the literature, and a brief survey of companies involved in commercial use and manufacture of incinerators. The report includes: (1) typical organochlorine waste compositions, (2) descriptions of emissions produced during at-sea and land-based incineration, (3) a simulation of corresponding air quality changes, (4) a description of predicted paths of transport of emission constituents, (5) estimates of water quality changes associated with both types of incineration, (6) an assessment of the potential for malfunction which could produce adverse environmental effects, (7) a general discussion of the kinds of environmental impacts associated with the incineration processes, and (8) identification of areas where there are needs for upgrading existing systems and data gaps which limit the comprehensiveness of the analysis.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-283 661
Standards Support Document: Promulgated Amendments to the National Emission Standard for Asbestos
EPA, Research Triangle Park, NC, OAQPS
Jun 78, 24p, EPA-450/2-77-030, PC A02/MF A01

Abstract: The national emission standard for asbestos is being amended. Scientific information indicates that asbestos exposure can cause cancer and other adverse health effects. The amendments will reduce asbestos emissions by requiring that proper work practices be followed during the renovation and demolition of buildings where friable asbestos materials are present and by prohibiting the spray application of asbestos materials which would be friable after drying. A brief description of the economic and environmental impacts associated with these amendments is included in this document.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
1522	RESIDENTIAL CONSTRUCTION, NEC
153	OPERATIVE BUILDERS
1531	OPERATIVE BUILDERS
154	NONRESIDENTIAL BUILDING CONSTRUCTION
1541	INDUSTRIAL BUILDINGS AND WAREHOUSES
1542	NONRESIDENTIAL CONSTRUCTION, NEC
16	HEAVY CONSTRUCTION CONTRACTORS
162	HEAVY CONSTRUCTION, EXCEPT HIGHWAY
1629	HEAVY CONSTRUCTION, NEC

PB-283 699
Source Assessment: Coal-Fired Residential Combustion Equipment Field Tests, June 1977
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
D. G. DeAngelis, R. B. Reznik
June 78, 97p, EPA-600/2-78-0040, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-284 029
Source Assessment: Crushed Stone
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, P. K. Chalekode, R. A. Wachter
May 78, 94p, EPA-600/2-78-004L, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
142	CRUSHED AND BROKEN STONE
1423	CRUSHED AND BROKEN GRANITE
1429	CRUSHED AND BROKEN STONE, NEC
14808-60-7	QUARTZ (SILICA DUST)
60676-86-0	SILICA
7631-86-9	SILICA

PB-284 203
Assessment of Human Exposures to Atmospheric Benzene
EPA, Research Triangle Park, NC, OAQPS
SRI International
S. J. Mara, S. S. Lee
Jun 78, 213p, EPA-450/3-78-031, PC A10/MF A01

Abstract: The report is one in a series that SRI International is providing on a quick response basis for the U. S. Environmental Protection Agency (EPA). Populations-at-risk to selected pollutants are being quantified for input to other more inclusive studies. The primary objective of this study was to estimate the environmental exposure of the U. S. populationto atmospheric benzene emissions from specific sources. In this estimate it was assumed that individuals residing in the vicinity of benzene sources spend 24 hours of each day in the same locations. To estimate more representative exposures, a second objective was added--to make rough estimates of individuals' total exposures by defining total exposure as the sum of exposures to all benzene sources including those in nonresidential areas, within a designated period.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
5541	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB-284 297
Source Assessment: Coal Storage Piles
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, R. A. Wachter
May 78, 98p, EPA-600/2-78-004K, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
1112	ANTHRACITE MINING SERVICES
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
1213	BITUMINOUS & LIGNITE MINING SERVICES

PB-284 378
Monitoring for Polychlorinated Biphenyl Emissions from an Electrolytic Capacitor Disposal Project
EPA, Research Triangle Park, NC, EMSL
E. Rodes, D. Jackson, G. Lewis
May 78, 23p, EPA-600/4-78-025, PC A02/MF A01

Abstract: Three different air sampling methods were used simultaneously to monitor for PCB emissions arising from a pilot disposal project involving electrolytic capacitors. Analytical results indicated that the primary polychlorinated biphenyl material was Aroclor 1242, and that airborne concentrations inside the building housing the grinders exceeded 5mg/cu m. The PCB air concentrations outside the building at a distance of 9m were typically <1.0 microgram/cu m. Measurements made with one low-volume and two high-volume air samples are compared.

CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB-285 000
Kepone Incineration Test Program
EPA, Cincinnati, Ohio, MERL
Design Partnership
B.A. Bell, F.C. Whitmore
May 78, 148p, EPA-600/2-78-108, PC A07/MF A01

Abstract: The Kepone Incineration Test (KIT) program was undertaken to evaluate incineration as a method of destroying Kepone and Kepone-containing materials and to determine the range of operating variables required for complete destruction. The program was divided into two phases: (a) experiments involving the direct injection of low BTU solutions of Kepone into the afterburner, and (b) experiments involving the coin cineration of sewage sludge and various amounts of Kepone injected into a rotary kiln. Each phase was designed so that succeeding experiments involved longer amounts of Kepone and/or alterations in afterburner temperature and residence time.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
143-50-0	KEPONE
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-285 210
Source Assessment: Crushed Sandstone, Quartz, and Quartzite, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
P. K. Chalekode, T. R. Blackwood, R. A. Wachter
May 78, 69p, EPA-600/2-78-004N, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	DIMENSION STONE
1411	DIMENSION STONE
142	CRUSHED AND BROKEN STONE
1429	CRUSHED AND BROKEN STONE, NEC
149	MISCELLANEOUS NONMETALLIC MINERALS
1499	NONMETALLIC MINERALS, NEC
60676-86-0	SILICA

PB-285 662
Source Assessment: Chemical and Fertilizer Mineral Industry, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood
June 78, 137p, EPA-600/2-78-004P, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1474	POTASH, SODA, AND BORATE MINERALS
1475	PHOSPHATE ROCK
1476	ROCK SALT
1477	SULFUR
1479	CHEMICAL AND FERTILIZER MINING, NEC
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY

PB-285 968/4
Bioassay of 1,2-Dichloroethane for Possible Carcinogenicity. CAS No. 107-06-2
National Cancer Institute
Jan 78, 112p, NCI-CG-TR-55, PC A06/MF A01

Abstract: A bioassay of technical-grade 1,2-dichloroethane for possible carcinogenicity was conducted using Osborne-Mendel rats and B6C3F1 mice. 1,2-Dichloroethane in corn oil was administered by gavage, at either of two dosages, to groups of 50 male and 50 female animals of each species for 78 weeks. Twenty animals of each sex and species were placed on test as vehicle controls. Twenty animals of each sex and species were used as untreated controls. Squamous-cell carcinomas of the forestomach and hemangiosarcomas of the circulatory system in the male rats and adenocarcinomas of the mammary gland in female rats showed a statistically significant increase. Under the conditions of this study, 1,2-dichloroethane is carcinogenic to Osborne-Mendel rats, causing squamous-cell carcinomas of the forestomach, hemangio- sarcomas, and subcutaneous fibromas in male rats and causing mammary adenocarcinomas in female rats. This compound was also found to be carcinogenic to B6C3F1 mice, causing mammary adenocarcinomas and endometrial tumors in female mice, and causing alveolar/bronchiolar adenomas in mice of both sexes.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-06-2	ETHYLENE DICHLORIDE

PB-286 155
Electric Utility Steam Generating Units: Background Information for Proposed NOx Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 78, 226p, EPA-450/2-78-005A, PC A11/MF A01

Abstract: Standards of performance for new statio ary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
10102-44-0	NITROGEN DIOXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-286 159
Utility Steam Generating Units: Background Information for Proposed SO2 Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 78, 107p, EPA-450/2-78-007A-1, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB-286 224
Electric Utility Steam Generating Units - Particulate Matter, Background Information for Proposed Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 78, 182p, EPA-450/2-78-006A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-286 225
Electric Utility Steam Generating Units - Background Information for Proposed SO2 Emission Standards
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
Jul 78, 488p, EPA-450/2-78-007A, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB-287 371
Environmental Exposure to Airborne Contaminants in the Nickel Industry, 1976-1977
National Institute of Occupational Safety and Health
1978, 35 p., PC A03/MF A01
NIOSH PUB No: 78-178, UNAVAIL NIOSH

Abstract: The National Institute for Occupational Safety and Health (NIOSH) conducted an industry-wide study of three different nickel processing operations. Since arsenic and crystalline silica were found in the plants surveyed and they have been implicated as either co-carcinogens for development of lung cancer or as causative agents for fibrotic lung disease, exposures to these and other metals as well as nickel were evaluated. Almost all of the environmental concentrations of airborne nickel in the plants met the Occupational Safety and Health Administration (OSHA) standard of 1 mg Ni/cu m. Plant A was also in most cases, well below the current American Conference of Governmental Industrial Hygienists Threshold Limit Values (ACGIH-TLV) recommendations of 0.1 mg Ni/cu m. However, in none of the plants were exposures in the range of the NIOSH recommended standard of 0.015 mg/cu m.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
14808-60-7	QUARTZ (SILICA DUST)
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
7440-02-0	NICKEL
7440-38-2	ARSENIC

PB-288 161
Source Assessment: Acrylic Acid Manufacture: State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
R. W. Serth, D. R. Tierney, T. W. Hughes
Aug 78, 85p, EPA-600/2-78-004W, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-02-8	ACROLEIN
108-95-2	PHENOL
115-07-1	PROPYLENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
64-19-7	ACETIC ACID
67-64-1	ACETONE
71-43-2	BENZENE
75-07-0	ACETALDEHYDE
79-10-7	ACRYLIC ACID

PB-288 210
Source Assessment: Coal Refuse Piles, Abandoned Mines and Outcrops, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
P. K. Chalekode, T. R. Blackwood
Jul 78, 52p, EPA-600/2-78-004V, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-PON	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
1112	ANTHRACITE MINING SERVICES
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
1213	BITUMINOUS & LIGNITE MINING SERVICES
7664-41-7	AMMONIA
7783-06-4	HYDROGEN SULFIDE

PB-288 475/7
Bioassay of Dibenzo-p-Dioxin for Possible Carcinogenicity
National Cancer Institute
Aug 78, 105p, NCI-CG-TR-122, PC A06/MF A01

Abstract: A bioassay of dibenzo-p-dioxin (UDD) for possible carcinogenicity was conducted by administering the test chemical in feed to Osborne-Mendel rats and B6C3F1 mice. Groups of 35 rats of each sex were administered UDD at one of two doses, either 5,000 or 10,000 ppm, for 110 weeks. Groups of 50 mice of each sex were administered the same doses for 87 or 90 weeks. Controls consisted of groups of 35 untreated rats of each sex and 50 untreated mice of each sex. No tumors were induced in rats or mice of either sex at incidences that were significantly higher in the dosed groups than in the corresponding control groups. It is concluded that under the conditions of this bioassay, UDD was not carcinogenic for Osborne-Mendel rats or B6C3F1 mice.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB-288 497
Source Assessment: Open Mining of Coal, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. J. Rusek, et al.
Sep 78, 90p, EPA-600/2-78-004X, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
14808-60-7	QUARTZ (SILICA DUST)
60676-86-0	SILICA
74-82-8	METHANE
7631-86-9	SILICA

PB-289 788
Source Assessment: Transport of Sand and Gravel
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, P. K. Chalekode, T. R. Blackwood
Oct 78, 63p, EPA-600/2-78-004Y, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
40	RAILROAD TRANSPORTATION
401	RAILROADS
4011	RAILROADS, LINE-HAUL OPERATING
42	TRUCKING AND WAREHOUSING
421	TRUCKING, LOCAL AND LONG DISTANCE
4212	LOCAL TRUCKING, WITHOUT STORAGE
4213	TRUCKING, EXCEPT LOCAL
60676-86-0	SILICA

PB-289 877
A Review of Standards of Performance for New Stationary Sources-Iron and Steel Plants/Basic Oxygen Furnaces
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
M. Drabkin, R. Helfand
Nov 78, 72p, EPA-450/3-78-116, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB-290 125
Source Assessment: Charcoal Manufacturing, State of the Art.
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
C. M. Moscowitz
Dec 78, 90p, EPA-600/2-78-004Z, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS

PB-291 639
Industrial Process Profiles for Environmental Use: Chapter 2. Oil and Gas Production Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
G. E. Wilkins
Feb 77, 112p, EPA-600/2-77-023B, PC A06/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
13	OIL AND GAS EXTRACTION
131	CRUDE PETROLEUM AND NATURAL GAS
1311	CRUDE PETROLEUM AND NATURAL GAS
132	NATURAL GAS LIQUIDS
1321	NATURAL GAS LIQUIDS
138	OIL AND GAS FIELD SERVICES
1381	DRILLING OIL AND GAS WELLS
1382	OIL AND GAS EXPLORATION SERVICES
1389	OIL AND GAS FIELD SERVICES, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
299	MISC. PETROLEUM AND COAL PRODUCTS
2992	LUBRICATING OILS AND GREASES
2999	PETROLEUM AND COAL PRODUCTS, NEC

PB-291 640
Industrial Process Profiles for Environmental Use: Chapter 10. Plastics and Resins Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
G. E. Wilkins
Feb 77, 326p, EPA-600/2-77-023J, PC A15/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-RESIN	RESINS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB-291 641
Industrial Process Profiles for Environmental Use. Chapter 12. The Explosives Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
C. E. Hudak, T. B. Parsons
Feb 77, 122p, EPA-600/2-77-023L, PC A06/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2892	EXPLOSIVES

PB-291 642
Industrial Process Profiles for Environmental Use: Chapter 13, Plasticizers Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
C. M. Thompson
Feb 77, 70p, EPA-600/2-77-023M, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS

PB-291 747
Source Assessment: Noncriteria Pollutant Emissions (1978 Update)
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corporation
E. C. Eimutis, R. P. Quill, G. M. Rinaldi
Jul 78, 152p, EPA-600/2-78-004T, PC A08/MF A01

Abstract: The report lists stationary sources that emit each of 389 noncriteria pollutants. It also indicates quantities of such emissions. The list was prepared using a computerized data base established for emissions of air pollutants from approximately 800 stationary source types in the combustion, organic materials, inorganic materials, and open source categories. (A source type is defined as a group of emission sources which have the same process and emission characteristics).

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
20	FOOD AND KINDRED PRODUCTS
21	TOBACCO MANUFACTURES
22	TEXTILE MILL PRODUCTS
25	FURNITURE AND FIXTURES
26	PAPER AND ALLIED PRODUCTS
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
30	RUBBER AND MISC. PLASTICS PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
36	ELECTRIC AND ELECTRONIC EQUIPMENT
37	TRANSPORTATION EQUIPMENT
38	INSTRUMENTS AND RELATED PRODUCTS
39	MISCELLANEOUS MANUFACTURING INDUSTRIES

PB-292 278
A Review of Standards of Performance for New Stationary Sources-Sulfuric Acid Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
M. Drabkin, K. J. Brooks
Jan 79, 90p, EPA-450/3-79-003, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

PB-293 506/2
Survey for Airborne Nitrosamines
National Cancer Institute
1978, 75 p., PC A04/MF A01

Abstract: A survey for airborne volatile nitrosamines was carried out in Los Angeles and Contra Costa Counties and at a rocket fuel plant near Hollister, California. A mobile sampling unit with ambinet aqueous KOH bubblers was used, followed by extraction, concentration, and analysis by gas chromatography with thermal energy analysis detection. The detection is based on decomposition of nitrosamines to NO which gives chemiluminescence upon reacting with ozone. Low levels of dimethyl and diethylnitrosamine were observed sporadically at numerous locations but gave no clear indication of significant point sources. Most samples were below 0.03 micrograms/cu m while the highest reached 1.0 micrograms/cu m. Temporal patterns showed morning and evening maxima and suggested photolysis in midday sun. No relationship between airborne nitrosamine levels by area and incidence of several human cancers is apparent.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB-293 594/8
Bioassay of Phthalic Anhydride for Possible Carcinogenicity
National Cancer Institute
Jan 79, 106p, NCI-CG-TR-159, PC A06/MF A01

Abstract: A bioassay of phthalic anhydride for possible carcinogenicity was conducted by administering the test chemical in feed to F344 rats and B6C3F1 mice. Groups of 50 animals of each sex and species were administered the chemical at one of two doses for 105 weeks. The doses for rats were 7,500 or 15,000 ppm. The time weighted average doses for male mice were either 16,346 or 32,692 ppm and for female mice were either 12,019 or 24,038 ppm. Matched controls consisted of 20 untreated animals of each species and sex. No tumors occurred in the rats or mice of either sex at incidences that could be clearly related to the administration of the test chemical. It is concluded that under the conditions of this bioassay, phthalic anhydride was not carcinogenic for F344 rats or B6C3F1 mice of either sex.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
85-44-9	PHTHALIC ANHYDRIDE

PB-294 938
Primary Aluminum: Draft Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants
EPA, Research Triangle Park, NC, OAQPS
Feb 79, 345p, EPA-450/2-78-049A, PC A15/MF A01

Abstract: This document serves as a text to State agencies in planning for control of fluoride emissions from existing primary aluminum plants. Achievable fluoride capture or removal efficiencies are given for new retrofit hooding and for primary and secondary removal devices, respectively. Methods for deriving capital and annualized costs are illustrated by a few examples. Costs and fluoride emission reductions achieved by actual retrofits are given for ten plants, and the construction scope of work is described in detail for three of these plants. The guidelines are presented as recommended control technologies that will achieve certain average control efficiencies when applied as new retrofits to existing plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB-294 962
A Review of Standards of Performance for New Stationary Sources - Nitric Acid Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp
M. Drabkin
Jan 79, 75p, EPA-450/3-79-013, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS

PB-295 649
Source Assessment: Residential Combustion of Coal
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
D. G. DeAngelis, R. B. Reznik
Jan 79, 145p, EPA-600/2-79-019A, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-296 135
Kraft Pulping - Control of TRS Emissions from Existing Mills
EPA, Research Triangle Park, NC, OAQPS
Mar 79, 212p, EPA-450/2-78-003B, PC A10/MF A01

Abstract: Guidelines to aid the State in their preparation of plans for the control of emissions of total reduced sulfur (TRS) from existing kraft pulp mills are being published under the authority of Section 111(d) of the Clean Air Act. TRS emissions from kraft pulp mills are extremely odorous, and there are numerous instances of poorly controlled mills creating public odor problems. Adoption of these emission guidelines by the States would result in an overall reduction of about 80 percent in nationwide TRS emissions from kraft pulp mills.

CL-TRS	TOTAL REDUCED SULFUR
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-296 953
A Review of Standards for New Stationary Sources - Secondary Brass and Bronze Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
E. L. Keitz, K. J. Brooks
Jun 79, 88p, EPA-450/3-79-011, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS

PB-297 507-T
The Circulation of Carcinogens in the Environment
National Cancer Institute
1979, 418 p., $16.00/MF $3.00

Abstract: Contents: A brief outline of the epidemiology of cancer; Occupational cancer; General information on blastomogenic substances; The possibility of determing blastomogenic substances in the environment; Air pollution with blastomogenic substances; Sources of carcinogenic hydrocarbons in the atmosphere and principles of their prevention in man; The pollution of the soil with blastomogenic polycyclic aromatic hydrocarbons; Water pollution with blastomogenic substances; Contamination of food products with blastomogenic substances: Possible blastomogenicity of certain cosmetics and medicines; Hygienic norms for blastomogenic substances.

CL-CARCIN	CARCINOGENS
CL-PNA	POLYNUCLEAR AROMATICS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB-297 769
Special Occupational Hazard Review for Aldrin/Dieldrin
National Institute of Occupational Safety and Health
1978, 174 p., PC A05/MF A01
NIOSH PUB No: 78-201, UNAVAIL NIOSH

Abstract: The review on Aldrin/Dieldrin toxicity and a companion document prepared for DDT serve as comprehensive reports on the three most representative compounds of the organochlorine class of insecticides. Although Aldrin and Dieldrin are no longer produced in the U.S., they may still have some restricted uses including subsurface ground insertion for termite control, dipping of non-food roots and tops, and mothproofing by using closed-system manufacturing processes. Though the use of Aldrin and Dieldrin is banned in many countries, they are still manufactured in Europe and are used throughout the world for public health purpose. Based on the demonstrated potentials for tumor induction in rats and mice by Aldrin and Dieldrin, NIOSH recommends that workplace environmental limits no higher than 0.15 mg/cum be established for both compounds. The recommended exposure limit is the lowest concentration detectable by the current NIOSH validated sampling and analytical methods (NIOSH Methods S275 and S283). Workers should also avoid skin contact with Aldrin and Dieldrin, as these pesticides can be absorbed through the skin particularly when they are dissolved in organic solvents.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
309-00-2	ALDRIN
60-57-1	DIELDRIN

PB-297 822
Special Hazard Review With Control Recommendations for 4,4' Methylenebis (2-Chloroaniline)
National Institute of Occupational Safety and Health
1978, 75 p., PC A04/MF A01
NIOSH PUB No: 78-188, AVAIL NIOSH

Abstract: This report reviews current toxicity information on 4,4' Methylenebis (2-chloroaniline) and makes control recommendations. 4,4-Methylenebis (2-chloroaniline) has the formula C13H12C12N2. It is commercially important as a curing agent for diisoyanate-based polymers (polyurethanes) and epoxy resin systems. 4,4' Methylenebis(2-chloroani- line) is used to vary the hardness, flexibility, and impact strength of these products. 4,4' Methylenebis(2-chloroaniline) has been manufactured commercially in the U.S. since 1956. Above 200 C, 4,4' Methylenebis(2-chloroaniline), releases irritant and toxic vapors (primarily ortho-chloroaniline). NIOSH estimated through a national survey that in the early 1970's approximately 55,000 U.S. workers were potentially exposed to 4,4' Methylenebis(2-chloroaniline). The majority of these workers were employed in small-to-medium sized establishments where occupational health services may not have been readily available. This review provides an examination of information available in 1973 and a more detailed presentation of recent studies along with recommendations for control of workplace exposures to 4,4-Methylenebis (2-chloroaniline).

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
101-14-4	CURENE
28	CHEMICALS AND ALLIED PRODUCTS

PB-298 427
A Review of Standards of Performance for New Stationary Sources Asphalt Concrete Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
K. J. Brooks, E. L. Keitz, J. Watson
Jun 79, 152p, EPA-450/3-79-014, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3531	CONSTRUCTION MACHINERY

PB-298 510
Electric Utility Steam Generating Units: Background Information for Promulgated Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Jun 79, 341p, EPA-450/3-79-021, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-298 528
Glass Manufacturing Plants, Background Information: Proposed Standards of Performance. Volume I
EPA, Research Triangle Park, NC, OAQPS
Jun 79, 280p, EPA-450/3-79-005A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
3211	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
3229	PRESSED AND BLOWN GLASS, NEC

PB-300 480
A Review of Standards of Performance for New Stationary Sources - Petroleum Refineries
EPA, Research Triangle Park, NC, OAQPS
Mitre Corp.
K. Barrett, A. Goldfarb
Jan 79, 91p, EPA-450/3-79-008, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB-300 681
Source Assessment: Phosphate Fertilizer Industry
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. M. Nyers, et al.
May 79, 203p, EPA-600/2-79-019C, PC A10/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY
7664-41-7	AMMONIA

PB-300 977/6
Bioassay of Styrene for Possible Carcinogenicity
National Cancer Institute
Jan 79, 99p, NCI-CG-TR-185, PC A05/MF A01

Abstract: A bioassay for the possible carcinogenicity of styrene was conducted using Fischer 344 rats and B6C3F1 mice. Styrene was administered by gavage for 78 to 103 weeks to groups of 50 male and 50 female animals of each species. Forty rats of each sex and twenty mice of each sex were placed on test as vehicle controls. The high, medium, and low dosages administered to rats were, respectively, 2000, 1000 and 500 mg/kg. The high and low dosages administered to mice were 300 and 150 mg/kg, respectively. Only in male mice was there a positive association between styrene dosage and the incidences of a combination of adenomas and carcinomas of the lung. Under the conditions of this bioassay, an increased incidence of a combination of adenomas and carcinomas of the lung provided suggestive evidence for the carcinogenicity of styrene in male B6C3F1 mice. However, it is concluded that the bioassay gave no convincing evidence for the carcinogenicity of the compound in Fischer 344 rats or B6C3F1 mice of either sex.

NCI	NATIONAL CANCER INSTITUTE
100-42-5	STYRENE

PB80-112089
A Review of Standards of Performance for New Stationary Sources - Portland Cement Industry
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
K. W. Barrett
Oct 78, 83p, EPA-450/3-79-012, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC

PB80-115223
Current Intelligence Bulletin Reprints - Bulletins 18 Thru 30 for 1978
National Institute of Occupational Safety and Health
1979, 156 p., PC A08/MF A01
NIOSH PUB No: 79-146, UNAVAIL NIOSH

Abstract: In January 1975, the National Institute for Occupational Safety and Health (NIOSH) developed a Current Intelligence System. Through this system, persons concerned with occupational health are informed of health and safety hazards that have gone unrecognized or are greater hazards than generally known. Since the inception of the NIOSH Current Intelligence System, over 30 Current Intelligence Bulletins have been issued as part of the information dissemination process. The 1978 Bulletins have been reprinted in this publication. It is important to note that the Bulletins have been reprinted essentially as originally published and do not contain information that may have become available since the date of the publication. Also, for some of the substances, NIOSH may have since issued Criteria Documents with recommended occupational health standards. Contents: 2,4-Diaminoanisole in hair and fur dyes; Tetrachloroethylene (Perchloroethylene); Trimellitic anhydride (TMA); Ethylene thiourea (ETU); Ethylene dibromide and disulfiram toxic interaction; Direct black 38, direct blue 6, and direct brown 95 benzidine derived dyes; Ethylene dichloride (1,2-dichloroethane); NIAX catalyst ESN; Chloroethanes - review of toxicity; Vinyl halides - carcinogenicity; Glycidyl ethers; and Epichlorohydrin.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-89-8	EPICHLOROHYDRIN
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
127-18-4	TETRACHLOROETHYLENE
16071-86-6	DIRECT BROWN 95
1937-37-7	DIRECT BLACK 38
2602-46-2	DIRECT BLUE 6
552-30-7	TRIMELLITIC ANHYDRIDE
615-05-4	ANISOLE,2,4-DIAMINO
75-00-3	CHLOROETHANE
96-45-7	ETHYLENE THIOUREA
97-77-8	TETRAETHYLTHIURAM DISULFIDE

PB80-123540
Automobile and Light-Duty Truck Surface Coating Operations - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 79, 330p, EPA-450/3-79-030, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES

PB80-124787
A Review of Standards of Performance for New Stationary Sources - Incinerators
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
R. M. Helfand
Mar 79, 64p, EPA-450/3-79-009, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB80-125446
A Review of Standards of Performance for New Stationary Sources - Sewage Sludge Incinerators
EPA, Research Triangle Park, N.C., OAQPS
MITRE Corp.
R.M. Helfand
Mar 79, 70p, EPA-450/3-79-010, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB80-126022
Standard Support and Environmental Impact Statement. Volume II: Promulgated Standards of Performance for Stationary Gas Turbines
EPA, Research Triangle Park, N.C., OAQPS
Sep 79, 64p, EPA-450/2-77-017B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
35	MACHINERY, EXCEPT ELECTRICAL
351	ENGINES AND TURBINES
3511	TURBINES AND TURBINE GENERATOR SETS

PB80-128812
Source Assessment: Solvent Evaporation - Degreasing Operations
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. J. Hoogheem, et al.
Aug 79, 133p, EPA-600/2-79-019F, PC A07/MF 101

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
75-09-2	METHYLENE CHLORIDE

PB80-131485
Source Assessment: Analysis of Uncertainty -- Principles and Applications
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. W. Serth, et al.
Aug 78, 181p, EPA-600/2-78-004U, PC A09/MF A01

Abstract: The report provides the results of a study that was conducted to analyze the uncertainties involved in the calculation of the decision parameters used in the Source Assessment Program and to determine the effect of these uncertainties on the decision-making procedure. A general procedure for performing an analysis of uncertainty is developed based on the principles of error propagation and statistical inference. It is shown that this simple and straightforward method represents an approximation to standard statistical techniques. The approximate method is illustrated by application to four problems in the area of environmental control. The general procedure is used to establish guidelines for conducting air emissions studies in the Source Assessment Program. In particular, guidelines are established for precision in field sampling and analytical work, and for setting critical values of decision parameters.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB80-137912
Organic Solvent Cleaners - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Oct 79, 282p, EPA-450/2-78-045A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
71-55-6	TRICHLOROETHANE,1,1,1-
73	BUSINESS SERVICES
739	MISCELLANEOUS BUSINESS SERVICES
7399	BUSINESS SERVICES, NEC
75-09-2	METHYLENE CHLORIDE
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-
79-01-6	TRICHLOROETHYLENE

PB80-138209
Source Assessment: Chlorinated Hydrocarbons Manufacture
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
Z. S. Khan, T. W. Hughes
Aug 79, 191p, EPA-600/2-79-019G, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
106-89-8	EPICHLOROHYDRIN
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM
75-44-5	PHOSGENE
75-56-9	PROPYLENE OXIDE

PB80-140163
Ammonium Sulfate Manufacture - Background Information for Proposed Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 79, 321p, EPA-450/3-79-034A, PC A14/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
7783-20-2	AMMONIUM SULFATE

PB80-141625
Phosphate Rock Plants - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 79, 381p, EPA-450/3-79-017A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
51	WHOLESALE TRADE-NONDURABLE GOODS
519	MISC. NONDURABLE GOODS
5191	FARM SUPPLIES

PB80-146293
Status Assessment of Toxic Chemicals
EPA, Cincinnati, OH, IERL, Monsanto Research Corp.
Dec 79, 570p-in 15 repts, PC E99
Set includes PB80-146301, PB80-146319, PB80-146327, PB80-146335, PB80-146343, PB80-146350, PB80-146368, PB80-146376, PB80-146384, PB80-146392, PB80-146400, PB80-146418, PB80-146426, PB80-146434, and PB80-146442.

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS

PB80-146301
Status Assessment of Toxic Chemicals: Acrylonitrile
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, G. E. Wilkins
Dec 79, 34p, EPA-600/2-79-210A, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB80-146319
Status Assessment of Toxic Chemicals: Arsenic
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, S. R. Archer, T. K. Corwin
Dec 79, 47p, EPA-600/2-79-210B, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
7440-38-2	ARSENIC

PB80-146327
Status Assessment of Toxic Chemicals: Asbestos
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood.
Dec 77, 33p, EPA-600/2-79-210C, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1332-21-4	ASBESTOS
26	PAPER AND ALLIED PRODUCTS
266	BUILDING PAPER AND BOARD MILLS
2661	BUILDING PAPER AND BOARD MILLS
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS

PB80-146335
Status Assessment of Toxic Chemicals: Benzene
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood, L. D. Zeagler
Dec 79, 50p, EPA-600/2-79-210D, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB80-146343
Status Assessment of Toxic Chemicals: Benzidine
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, N. P. Meserole
Dec 79, 31p, EPA-600/2-79-210E, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
92-87-5	BENZIDINE

PB80-146350
Status Assessment of Toxic Chemicals: Cadmium
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, R. D. Wilson
Dec 79, 34p, EPA-600/2-79-210F, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
7440-43-9	CADMIUM

PB80-146368
Status Assessment of Toxic Chemicals: Hexachlorobenzene
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, T. G. Sipes
Dec 79, 30p, EPA-600/2-79-210G, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
118-74-1	HEXACHLOROBENZENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS

PB80-146376
Status Assessment of Toxic Chemicals: Lead
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, T. M. Briggs
Dec 79, 48p, EPA-600/2-79-210H, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
7439-92-1	LEAD POWDER

PB80-146384
Status Assessment of Toxic Chemicals: Mercury
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, T. M. Briggs
Dec 79, 37p, EPA-600/2-79-210I, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7439-97-6	MERCURY

PB80-146392
Status Assessment of Toxic Chemicals: Phosphates
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood
Dec 79, 34p, EPA-600/2-79-210J, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC

PB80-146400
Status Assessment of Toxic Chemicals: Polybrominated Biphenyls
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, C. S. Collins
Dec 79, 33p, EPA-600/2-79-210K, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
59536-65-1	POLYBROMINATED BIPHENYLS

PB80-146418
Status Assessment of Toxic Chemicals: Polynuclear Aromatic Hydrocarbons
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, G. E. Wilkins
Dec 79, 48p, EPA-600/2-79-210L, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES

PB80-146426
Status Assessment of Toxic Chemicals: Trichloroethylene
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood, W. C. Micheletti
Dec 79, 38p, EPA-600/2-79-210M, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
20	FOOD AND KINDRED PRODUCTS
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
79-01-6	TRICHLOROETHYLENE

PB80-146434
Status Assessment of Toxic Chemicals: Tris(2,3-Dibromopropyl) Phosphate
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, P. J. Murin
Dec 79, 27p, EPA-600/2-79-210N, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
126-72-7	DIBROMOPROPYLPHOSPHATE,TRIS,2,3-
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS

PB80-146442
Status Assessment of Toxic Chemicals: Vinylidene Chloride
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, M. R. Piana
Dec 79, 37p, EPA-600/2-79-2100, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2824	ORGANIC FIBERS, NONCELLULOSIC
75-35-4	DICHLOROETHYLENE,1,1-

PB80-150592
Source Assessment: Manufacture of Acetone and Phenol from Cumene
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. L. Delaney, T. W. Hughes
May 79, 200p, EPA-600/2-79-019D, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
108-95-2	PHENOL
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
67-64-1	ACETONE

PB80-152812
Benzene Emissions from Maleic Anhydride Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Feb 80, 200p, EPA-450/3-80-001A, PC A09/MF A01

Abstract: A National Emission Standard for the control of benzene emissions from maleic anhydride plants is being proposed under the authority of section 112 of the Clean Air Act. The proposed standard would apply to both new and existing sources. This document contains background information and environmental and economic assessments of the regulatory alternatives considered in developing the proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
108-31-6	MALEIC ANHYDRIDE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB80-153885
Assessment of Human Exposures to Atmospheric Cadmium
EPA, Research Triangle Park, NC, OAQPS
Energy and Environmental Analysis, Inc.
R. Coleman, et al.
Jun 79, 138p, EPA-450/5-79-007, PC MF A01

Abstract: The report is one of a series of report. which will be used by EPA in responding to the Congressional mandate under the Clear Air Act Amendments of 1977 to determine whether atmospheric emissions of cadmium pose a threat to public health. The report identifies the population exposed to specified cadmium levels from selected point sources. The sources considered are iron and steel mills, municipal incinerators, primary smelters (zinc, copper, lead, and cadmium), and secondary smelters (copper and zinc). Municipal incinerators are the chief contributors to the total population exposed. Primary zinc and primary copper smelters are estimated to cause the highest concentrations.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES
3322	MALLEABLE IRON FOUNDRIES
3325	SIC - 3325 STEEL FOUNDRIES, NEC
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3333	PRIMARY ZINC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB80-153935
Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants
EPA, Research Triangle Park, NC, OAQPS
Dec 79, 346p, EPA-450/2-78-049B, PC A15/MF A01

Abstract: This document serves as a text to State agencies in planning for control of fluoride emissions from existing primary aluminum plants. Achievable fluoride capture and removal efficiencies are given for new retrofit hooding and for primary and secondary removal devices, respectively. Methods for deriving capital and annualized costs are illustrated by a few examples. Costs and fluoride emission reductions achieved by actual retrofits are given for ten plants, and the construction scope of work is described in detail for three of these plants. The guidelines are presented as recommended control technologies that will achieve certain average control efficiencies when applied as new retrofits to existing plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
7429-90-5	ALUMINUM

PB80-154065
A Review of Standards of Performance for New Stationary Sources - Secondary Lead Smelters
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
J. W. Watson, K. J. Brooks
Mar 79, 131p, EPA-450/3-79-015, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7439-92-1	LEAD POWDER

PB80-154602
Review of Standards of Performance for Electric Arc Furnaces in Steel Industry
EPA, Research Triangle Park, NC, OAQPS
Oct 79, 59p, EPA-450/3-70-033, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES

PB80-164874
Criteria for a Recommended Standard: Occupational Exposures in Coal Gasification Plants
National Institute of Occupational Safety and Health
1978, 206 p., PC A10/MF A01
NIOSH PUB No: 78-191, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
29	PETROLEUM AND COAL PRODUCTS
299	MISC. PETROLEUM AND COAL PRODUCTS
2999	PETROLEUM AND COAL PRODUCTS, NEC

PB80-175862
Environmental Exposure to Airborne Contaminants in the Antimony Industry 1975-1976
National Institute of Occupational Safety and Health
1979, 27 p., PC A03/MF A01
NIOSH PUB No: 79-140, AVAIL NIOSH

Abstract: A study of the antimony production industry in the United States was undertaken by the National Institute for Occupational Safety and Health (NIOSH) since a study by Cunningham and McCallum of Associated Lead Manufacturing, Ltd., disclosed 17 cases of respiratory cancer during the last 10 years among antimony production workers in England. The 1975 NIOSH study involved the monitoring of three major antimony producers, two of which roast. Two imported antimony sulfide ore to produce antimony oxide (Plants B and C), while the other (Plant A), the only producer of antimony metal in the United States, produces antimony oxide by the oxidation of purified antimony metal. A follow-up study on Plant A was made in 1976 to collect breathing zone samples since these were not gathered in the preliminary survey. The three plants showed antimony exposures above the current OSHA standard of 0.5 mg/cu m. The arsenic exposures although below the then current OSHA standard of 0.5 mg/cu m exceeded in most instances the current OSHA standard of 0.010 mg/cu m. Bagging operations appeared to be one of the larger air contamination sources in two of the plants. Controlling airborne antimony to 0.5 mg/cu m may possibly reduce airborne arsenic to the OSHA standard.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
7440-36-0	ANTIMONY
7440-38-2	ARSENIC

PB80-175870
Criteria for a Recommended Standard: Occupational Exposure to Dinitro-Ortho-Cresol
National Institute of Occupational Safety and Health
1978, 159 p., PC A08/MF A01
NIOSH PUB No: 78-131, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
534-52-1	DINITROCRESOL,4,6-,O-

PB80-176050
Criteria for a Recommended Standard: Occupational Exposure to Furfurl Alcohol
National Institute of Occupational Safety and Health
1979, 72 p., PC A04/MF A01
NIOSH PUB No: 79-133, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
98-00-0 FURFURAL ALCOHOL

PB80-176076
Criteria for a Recommended Standard: Occupational Exposure to Ketones
National Institute of Occupational Safety and Health
1978, 255 p., PC A12/MF A01
NIOSH PUB No: 78-173, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB80-176092
Revised Recommended Standard: Occupational Exposure to Ethylene Dichloride (1,2-Dichloroethane)
National Institute of Occupational Safety and Health
1978, 38 p., PC A03/MF A01
NIOSH PUB No: 78-211, AVAIL NIOSH

Abstract: NIOSH considers the evidence of carcinogenicity of ethylene dichloride reported by the National Cancer Institute to be conslusive in two mammalian species (the rate and the mouse). Since ethylene dichloride causes progressive, malignant disease of various organs in two species of animals, NISOH recommends that ethylene dichloride be considered carcinogenic in man. Therefore, because it is not presently possible to establish an exposure level at which ethylene dichloride may be regarded to be without risk, NIOSH recommends that exposure to ethylene dichloride be kept as low as feasible. The use of ethylene dichloride as a solvent, diluent, or fumigant in open operations should be prohibited. Product substitution should be a paramount consideration, and wherever ethylene dichloride is identified or its presence suspected, it should be replaced by a less harmful substitute.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
107-06-2 ETHYLENE DICHLORIDE

PB80-176993
Criteria for a Recommended Standard: Occupational Exposure to Vinyl Acetate
National Institute of Occupational Safety and Health
1978, 89 p., PC A05/MF A01
NIOSH PUB No: 78-205, AVAIL NIOSH
GPO No: 017-033-00362-9, $5.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
108-05-4 VINYL ACETATE

PB80-177207
Source Assessment: Dry Bottom Industrial Boilers Firing Pulverized Bituminous Coal
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. R. McCurley, et al.
Jun 79, 199p, EPA-600/2-79-019E, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB80-181472
Source Assessment: Prescribed Burning, State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
C. T. Chi, et al.
Nov 79, 122p, EPA-600/2-79-019H, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
08	FORESTRY

PB80-187388
Quantitative Analysis of Polynuclear Aromatic Hydrocarbons in Liquid Fuels
EPA, Research Triangle Park, NC, ESRL
Radian Corp.
J.L. Parr
Apr 80, 44p, EPA-600/2-80-069, PC A03/MF A01

Abstract: Polynuclear aromatic hydrocarbons (PNAs), formed in combustion processes with liquid hydrocarbon fuels, contribute to mobile source exhaust emissions. Because correlation between PNA levels in automobile exhaust and pre-existent PNAs in fuel has been demonstrated in previous work, a quantitative analysis of 12 individual polynuclear aromatic hydrocarbons present in various aircraft turbine, diesel, and gasoline test fuels was determined in this project. The PNAs included phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, triphenylene, benzo(a)pyrene, benzo(e)pyrene, benzo(g,h,i)perylene, coronene and anthanthrene. The fuel samples were analyzed by combined gas chromatography/mass spectrometry (GC-MS) after a preliminary isolation/concentration scheme. Liquid crystal chromatographic columns were employed to resolve isomeric PNAs. The results indicated that anthanthrene and coronene were not detected in any of the samples analyzed.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB80-187545
Environmental Assessment of Iron Casting
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
V.H. Baldwin, Jr.
Jan 80, 171p, EPA-600/2-80-021, PC A08/MF A01

Abstract: Sampling of ductile iron casting in green sand molds with phenolic isocyanate cores and in phenol-formaldehyde bound shell molds did not provide definitive proof that environmentally hazardous organic emissions occur. Both molding systems produced the same type of major emissions, alkyl halides, carboxylic acid derivatives, amines, substituted benzenes, nitrogen heterocyclics, and fused aromatics in quantities that slightly exceed the lowest Minimum Acute Toxicity Effluent (MATE) values for the categories, but probably not for individual compounds. GC-MS analysis revealed the major fused aromatics to be naphthalene compounds. Quantitative analysis of specific PNAs showed no significant level of concern. Inorganic dust emissions are hazardous if uncontrolled because of silicon, chromium, and nickel. The dust is sufficiently high in 12 metals to render it a hazardous waste if collected as a sludge and landfilled, but leachate testing may change that categorization. Relatively high levels of Sr, Ba, Ce, Pr, and Nd in the dust indicate that inoculation smoke should be examined.

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES
34	FABRICATED METAL PRODUCTS
7440-02-0	NICKEL
7440-39-3	BARIUM
7440-47-3	CHROMIUM

PB80-192479
Primary Aluminum - Background Information for Promulgated Amendments
EPA, Research Triangle Park, NC, OAQPS
Mar 80, 33p, EPA-450/3-79-026, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
7429-90-5	ALUMINUM

PB80-193352
Occupational Exposure to Talc Containing Asbestos
National Institute of Occupational Safety and Health
1980, 117 p., PC A06/MF A01
NIOSH PUB No: 80-115, AVAIL NIOSH
GPO No: 017-033-00357-2, $5.50

Abstract: The National Institute for Occupational Safety and Health (NIOSH) conducted studies of mortality and morbidity patterns and occupational exposures among talc miners and millers in upper New York. The mortality study was based on 398 white male workers who began employment between January 1, 1947 and December 31, 1959 and whose vital status was determined as of June 30, 1975. Observed cause specific mortality for the cohort as compared with that expected based on U.S. white male mortality rates indicated a significant increase in mortality due to bronchogenic cancer, nonmalignant respiratory disease (excluding influenza and pneumonia) and respiratory tuberculosis. The average latency period for bronchogenic cancer was 20 years.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1332-21-4	ASBESTOS
14	NONMETALLIC MINERALS, EXCEPT FUELS
14807-96-6	TALC
149	MISCELLANEOUS NONMETALLIC MINERALS
1496	TALC, SOAPSTONE, AND PYROPHYLLITE

PB80-194152
Standards Support and Environmental Impact Statement. Volume 1: Proposed Standards of Performance for Grain Elevator Industry
EPA, Research Triangle Park, NC, OAQPS
Jan 77, 348p, EPA-450/2-77-001A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
01	AGRICULTURAL PRODUCTION-CROPS
02	AGRICULTURAL PRODUCTION-LIVESTOCK
07	AGRICULTURAL SERVICES
42	TRUCKING AND WAREHOUSING
422	PUBLIC WAREHOUSING
4221	FARM PRODUCT WAREHOUSING AND STORAGE
51	WHOLESALE TRADE-NONDURABLE GOODS
515	FARM-PRODUCT RAW MATERIALS
5153	GRAIN

PB80-194491
Standards Support (Final) and Environmental Impact Statement. Volume II: Promulgated Standards of Performance for Lime Manufacturing Plants
EPA, Research Triangle Park, NC, OAQPS
Oct 77, 24p, EPA-450/2-77-007B, PC A02/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
14	NONMETALLIC MINERALS, EXCEPT FUELS
142	CRUSHED AND BROKEN STONE
1422	CRUSHED AND BROKEN LIMESTONE
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB80-198435
Standards Support and Environmental Impact Statement. Volume 2: Promulgated Standards of Performance for Grain Elevator Industry
EPA, Research Triangle Park, NC, OAQPS
Apr 78, 92p, EPA-450/2-77-001B, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
01	AGRICULTURAL PRODUCTION-CROPS
02	AGRICULTURAL PRODUCTION-LIVESTOCK
07	AGRICULTURAL SERVICES
42	TRUCKING AND WAREHOUSING
422	PUBLIC WAREHOUSING
4221	FARM PRODUCT WAREHOUSING AND STORAGE
51	WHOLESALE TRADE-NONDURABLE GOODS
515	FARM-PRODUCT RAW MATERIALS
5153	GRAIN

PB80-202997
Electric Arc Furnaces in Ferrous Foundries - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
May 80, 306p, EPA-450/3-80-020A, PC A14/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB80-208788
Chemical Hazard Information Profiles (CHIPs)
EPA, Washington, D.C., OPTS
Apr 80, 296p, EPA-560/11-80-011, PC A13/MF A01

Abstract: This collection of 40 Chemical Hazard Information Profile (CHIP) reports was prepared by the Office of Pesticides and Toxic Substances (OPTS) between August 1, 1976, and November 20, 1979. Chemicals are chosen for CHIP preparation on the basis of information indicating potential for adverse health or environmental effects of significant exposure. The CHIP itself is a brief summary of readily available information concerning health and environmental effects and exposure potential of a chemical. Information gathering for a CHIP is generally limited to a search of secondary literature sources and is not intended to be exhaustive; however, in depth searches on specific topics may be done on a case-by-case basis. In general, no attempt is made to evaluate or validate information at this stage of assessment. Preparation of a CHIP is part of the first stage in the OPTS Chemical Risk Assessment Process. The purpose of the CHIP is to enable OPTS to make a tentative decision on an appropriate course of action for the subject chemical and to identify and characterize problems that may require more thorough investigation and evaluation.

CL-ORGANIC	ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS

PB80-209778
Reference Method 24-Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings. Reference Method 25-Determination of Total Gaseous Nonmethane Organic Emissions as Carbon. Background Information for Promulgated Test Methods.
EPA, Research Triangle Park, NC, OAQPS
Jul 80, 22p, EPA-450/3-79-030C, PC A02/MF A01

Abstract: Reference Method 24 is used to determine the volatile organic compound (VOC) content of coating materials, and Reference Method 25 is used to determine the percentage reduction of VOC emissions achieved by emission control devices. These methods were proposed on October 5, 1979, as an appendix to the proposed standards of performance for automobile and light-duty truck surface coating operations. This document contains information on the public comments made after proposal and EPA responses to the comments.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
SS/AM	SOURCE SAMP/AMB MON
37	TRANSPORTATION EQUIPMENT

PB80-212111
Asphalt Roofing Manufacturing Industry - Background Information for Proposed Standards.
EPA, Research Triangle Park, NC, OAQPS
Jun 80, 419p, EPA-450/3-80-021A, PC A18/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2952	ASPHALT FELTS AND COATINGS

PB80-217946
Bioassay of Phenol for Possible Carcinogenicity
National Toxicology Program
Aug 80, 119p, NCI-CG-TR-203, PC A06/MF A01

Abstract: Phenol has been ranked 38th in production among U.S. chemicals with production of 2.38 billion pounds in 1978. A bioassay of phenol to test for possible carcinogenicity was conducted by providing this substance to groups of 50 F344 rats and 50 B6C3F1 mice of each sex in drinking water containing 2,500 or 5,000 ppm phenol for 103 weeks. As matched controls, groups of 50 rats and 50 mice of each sex received tap water. An increased incidence of leukemia or lymphomas detected in male rats may have been related to administration of phenol. Although the incidence of these tumors in the low-dose group was significantly higher than that in controls, the incidence in the high dose group was not. Thus an association with administration of phenol was not established. Under the conditions of this bioassay, phenol was not carcinogenic for either male or female F344 rates or male and female B6C3F1 mice.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
108-95-2	PHENOL

PB80-219421
Environmental Assessment of a Waste-to-Energy Process: Braintree Municipal Incinerator
EPA, Cincinnati, OH, IERL
Midwest Research Institute
M. Golembiewski, et al.
Aug 80, 230p, EPA-600/7-80-149, PC A11/MF A01

Abstract: Midwest Research Institute conducted an array of field tests at the Braintree Municipal Incinerator facility in Braintree, Massachusetts for the purpose of providing data on multimedia emissions to help determine adverse environmental impact and pollution control technology needs. There are two incinerators at the Braintree facility: both are of the waterwall type and are designed to burn unprocessed mixed municipal refuse at a rate of 120 tons/day each. Air pollution control is provided by electrostatic precipitators. Primary emphasis was placed on evaluating air emissions. Analyses were carried out for criteria pollutants as well as for potentially hazardous compounds such as polychlorinated biphenyls and polycyclic aromatic hydrocarbons. The Environmental Protection Agency-designed Source Assessment Sampling System train was also used as per the Environmental Protection Agency's Level 1 environmental assessment protocol. The data obtained were used to evaluate emissions in each effluent stream on the basis of existing standards or criteria and also through the use of the Environmental Protection Agency's recently devised Source Analysis Model (SAM-1A).

CL-PCB	POLYCHLORINATED BIPHENYLS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10024-97-2	NITROUS OXIDE
11097-69-1	AROCLOR 1254
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYLS
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE

PB80-219678
Sodium Carbonate Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Jun 80, 350p, EPA-450/3-80-029A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
497-19-8	SODIUM CARBONATE

PB80-219686
Benzene Emissions from the Ethylbenzene/Styrene Industry-Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 80, 326p, EPA-450/3-79-035A, PC A15/MF A01

Abstract: A National Emission Standard for the control of benzene emissions from ethylbenzene/styrene plants is being proposed under the authority of Section 112 of the Clear Air act. The proposed standard would apply to both new and existing sources. This document contains background information and environmental and economic assessments of the regulatory alternatives considered in developing the proposed standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB80-225717
Industrial Process Profiles for Environmental Use: Chapter 28. Primary Zinc Industry
EPA, Cincinnati, OH, IERL
PEDCo-Environmental Inc.
Jul 80, 89p, EPA-600/2-80-169, PC A05/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3333	PRIMARY ZINC
7440-66-6	ZINC

PB81-100497
Perchloroethylene Dry Cleaners - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
TRW Environmental Engineering Div.
Aug 80, 171p, EPA-450/3-79-029A, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
127-18-4	TETRACHLOROETHYLENE
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7215	COIN-OPERATED LAUNDRIES AND CLEANING
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB81-100711
Environmental Assessment of a Waste-to-Energy Process: Union Carbide Purox (Trademark) System
EPA, Cincinnati, OH, IERL
Midwest Research Institute
P. Gorman, et al.
Sep 80, 283p, EPA-600/7-80-161, PC A13/MF A01

Abstract: As part of a research program to assess the environmental impacts of various waste-to-energy conversion systems, on-site testing was carried out at Union Carbide Corporation's Purox facility at South Charleston, West Virginia. The Purox system pyrolyzes municipal solid waste, using oxygen, to produce a fuel gas with a heating value of 14.6 MJ/N cu m (370 Btu/scf). Sampling at the facility included four input/output streams (refuse, slag, water, and stack emissions). Water sampling included the pilot scale Unox wastewater treatment system. The boiler stack emissions were sampled when firing the Purox gas and when firing natural gas. Analysis was carried out for most conventional pollutants (CO, NOx, etc.), but included many special analyses (polynuclear aromatic hydrocarbons).

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB81-105942
Pressure Sensitive Tape and Label Surface Coating Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Aug 80, 327p, EPA-450/3-80-003A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2891	ADHESIVES AND SEALANTS

PB81-105967
Glass Manufacturing Plants - Background Information for Promulgated Standards of Performance
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 175p, EPA-450/3-79-0058, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS

PB81-108078
Source Assessment: Dry Bottom Utility Boilers Firing Pulverized Bituminous Coal
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
D. G. DeAngelis, et al.
Oct 80, 210p, EPA-600/2-80-042C, PC A10/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
50	WHOLESALE TRADE-DURABLE GOODS
507	HARDWARE, PLUMBING & HEATING EQUIPMENT
5074	PLUMBING & HYDRONIC HEATING SUPPLIES

PB81-110926
Industrial Process Profiles for Environmental Use: Chapter 27. Primary Lead Industry
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
Jul 80, 83p, EPA-600/2-80-168, PC A05/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
7439-92-1	LEAD POWDER

PB81-111536
Exposure to Pollutants from Domestic Combustion Sources: A Preliminary Assessment
EPA, Research Triangle Park, NC, IERL
TRC Environmental Consultants, Inc.
E.T. Brookman, A. Birenzvige
Apr 80, 51p, EPA-600/7-80-084, PC A04/MF A01

Abstract: The report gives results of a preliminary assessment of exposure to pollutants from domestic combustion sources, some of which emit airborne particulate matter (PM), CO, and polycyclic organic matter (POM) near human receptors. Transient ambient concentrations of these pollutants at the receptor (and the corresponding time-averaged exposures) have been determined for the following domestic combustion sources: lawn mowing, chain sawing, charcoal cooking, indoor gas cooking, and indoor side-stream smoke. Transient ambient concentrations of total suspended particulate (TSP) matter encountered were as high as 35 times the 24 hour secondary ambient air quality standard of 150 micrograms/cu m for TSP. However, large quantities of noncombustion-related PM on the filters (e.g., grass particles, sawdust), concurrent lower values of ambient CO relative to ambient air quality CO standards, and the absence of detectable POM indicate that these sources probably do not result in exposures to combustion-generated pollutants that are relatively significant.

CL-IAP	INDOOR AIR POLLUTANTS
CL-POM	POLYCYCLIC ORGANIC MATTER
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB81-113599
POM (Polycyclic Organic Matter) Source and Ambient Concentration Data: Review and Analysis
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
J.B. White, R.R. Vanderslice
Mar 80, 147p, EPA-600/7-80-044, PC A07/MF A01

Abstract: The report gives results of an analysis of source and ambient concentration data for polycyclic organic matter (POM). Based on the literature reviewed, POM data were summarized and the sampling and analytical techniques were critiqued and evaluated against state-of-the-art technology. It was concluded that sampling techniques contain uncertainties that limit the usefulness of these data in an environmental assessment of POM. The uncertainties include the possibility of the incomplete capture of POM during emission sampling, the chemical degradation of the collected sample during both emission source and ambient sampling, and the unproven reliability of benzo(a)pyrene as an indicator of total POM from emission sources or in ambient media. The uncertainties may be compounded by losses during analysis. Also, since it is not feasible to quantify all the POM which may be present in an environmental sample, the number of POMs reported will reflect the scope of the analytical strategy and the limitations of the analytical technique employed.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
50-32-8	BENZO(A)PYRENE

PB81-113904
Beverage Can Surface Coating Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 225p, EPA-450/3-80-036A, PC A10/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
341	METAL CANS AND SHIPPING CONTAINERS
3411	METAL CANS

PB81-113920
Automobile and Light-Duty Truck Surface Coating Operations - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 35p, EPA-450/3-79-030B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES

PB81-113938
Surface Coating of Metal Furniture - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 406p, EPA-450/3-80-007A, PC A18/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
25	FURNITURE AND FIXTURES
251	HOUSEHOLD FURNITURE
2514	METAL HOUSEHOLD FURNITURE
252	OFFICE FURNITURE
2522	METAL OFFICE FURNITURE
253	PUBLIC BUILDING & RELATED FURNITURE
2531	PUBLIC BUILDING & RELATED FURNITURE
259	MISCELLANEOUS FURNITURE AND FIXTURES
2599	FURNITURE AND FIXTURES, NEC

PB81-117145
Publication Rotogravure Printing - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 80, 259p, EPA-450/3-80-031A, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
27	PRINTING AND PUBLISHING
275	COMMERCIAL PRINTING
2754	COMMERCIAL PRINTING, GRAVURE

PB81-118747
Ammonium Sulfate Manufacture - Background Information for Promulgated Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 80, 22p, EPA-450/3-79-034B, PC A02/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7783-20-2	AMMONIUM SULFATE

PB81-122129
Review of New Source Performance Standards for Phosphate Fertilizer Industry - Revised
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 83p, EPA-450/3-79-038R, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS

PB81-123572
Metal Coil Surface Coating Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 80, 216p, EPA-450/3-80-035A, PC A10/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB81-125015
Polynuclear Aromatic Compounds. Synthesis and Purification
EPA, Research Triangle Park, NC, ESRL
Oklahoma State University, Stillwater
E.J. Eisenbraun
Dec 80, 100p, EPA-600/2-80-204, PC A05/MF A01

Abstract: The synthesis and/or purification of a group of polynuclear aromatic (PNA) compounds commonly found as pollutants in the environment are reviewed and discussed. Details of the experi-mental procedures and techniques as well as chromatographic and spectroscopic evidence of structure and purity of the compounds supplied to the U.S. Environmental Protection Agency are presented. In addition, the apparatus designed and constructed to meet the synthesis needs together with safety improvements for -handling toxic compounds are described. Publications resulting from this work and manuscripts in preparation are cited.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB81-136160
Source Assessment: Residential Combustion of Wood
EPA, Research Triangle Park, N.C., IERL
Monsanto Research Corp.
D. G. DeAngelis, et al.
Mar 80, 102p, EPA-600/2-80-042B, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB81-151433
Benzene Emissions from Benzene Storage Tanks - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 80, 277p, EPA-450/3-80-034A, PC A13/MF A01

Abstract: Standards of Performance for the control of emissions from benzene storage tanks are being proposed under the authority of Section 112 of the Clean Air Act. These standards would apply to all new and existing storage tanks having the capacity of 4 cubic meters or larger, which are to be used for the storage of pure benzene. Existing sources will have to comply with the standards within 90 days of its effective date, unless a waiver of compliance is secured from the Administrator. This document contains background information and environmental and economic impact assessment of the regulatory alternatives considered in developing the proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB81-151664
Benzene Fugitive Emissions - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 292p, EPA-450/3-80-032A, PC A13/MF A01

Abstract: A national emission standard for petroleum refining and organic chemical manufacturing industries is being proposed under authority of Section 112 of the Clean Air Act (42 U.S.C. 7412, as amended). The purpose of the proposed standard is to minimize benzene fugitive emissions in these industries. The document provides background information for the proposed standard. Control technologies and five regulatory alternatives are evaluated in terms of environmental and economic impacts on both new and existing emission sources. Included in the evaluation of economic impacts are estimates of total capital and annualized costs, including recovery credits.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB81-152167
VOC Fugitive Emissions in Synthetic Organic Chemicals Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 245p, EPA-450/3-80-033A, PC A11/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS

PB81-157810
Review of Standards of Performance for New Stationary Sources - Ferroalloy Production Facilities
EPA, Research Triangle Park, NC, OAQPS
PEDCo - Environmental, Inc.
R. W. Gerstle, W. F. Kemner, L. V. Yerino
Dec. 80, 98p, EPA 450/3-80-041, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
3313	ELECTROMETALLURGICAL PRODUCTS

PB81-161937
Source Assessment: Cotton and Synthetic Woven Fabric Finishing
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. D. McCurley, G. D. Rawlings
Jan 80, 196p, EPA-600/2-80-042A, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
223	WEAVING AND FINISHING MILLS, WOOL
2231	WEAVING AND FINISHING MILLS, WOOL
225	KNITTING MILLS
2252	HOSIERY, NEC
2258	WARP KNIT FABRIC MILLS
226	TEXTILE FINISHING, EXCEPT WOOL
2261	FINISHING PLANTS, COTTON
2262	FINISHING PLANTS, SYNTHETICS
2269	FINISHING PLANTS, NEC

PB81-164915
Industrial Process Profiles for Environmental Use: Chapter 29. Primary Copper Industry
EPA, Cincinnati, OH, IERL
PEDCo - Environmental, Inc.
Jul 80, 155p, EPA-600/2-80-170, PC A08/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER

PB81-167876
Extent of Exposure Survey of Methylene Chloride
National Institute of Occupational Safety and Health
1980, 47 p., PC A04/MF A01
NIOSH PUB No: 80-131, AVAIL NIOSH
GPO No: 017-033-00365-3, $4.75

Abstract: Occupational exposures to methylene chloride (75-09-2) were assessed at a facility that manufactured acetate and triacetate fibers, at a coffee processing facility, and at a U.S. Air Force aircraft maintenance facility. Process and control operations, personnel activity and health and safety programs at each installation were evaluated. Exposures to methylene chloride at the manufacturing facility were 31 to 561 parts per million (ppm). Only one of these samples exceeded the OSHA standard of 500 ppm. At the other two facilities, methylene chloride concentrations generally were below OSHA standards. The authors recommended that the OSHA standard for methylene chloride be lowered to 75 ppm.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
20	FOOD AND KINDRED PRODUCTS
209	MISC. FOODS AND KINDRED PRODUCTS
2095	ROASTED COFFEE
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2823	CELLULOSIC MAN-MADE FIBERS
37	TRANSPORTATION EQUIPMENT
372	AIRCRAFT AND PARTS
75-09-2	METHYLENE CHLORIDE

PB81-168510
Teratologic Assessment of Butylene Oxide, Stryrene Oxide and Methyl Bromide
National Institute of Occupational Safety and Health
1980, 76 p., PC A05/MF A01
NIOSH PUB No: 81-124, AVAIL NIOSH
GPO No: 017-033-00389-1, $5.00

Abstract: The general toxicology of butylene oxide (106-88-7) (bo), styrene oxide (96-09-3) (so), and methyl bromide (74-83-9) (mb) was investigated. Rats were exposed 7 hours a day for 5 days a week for 3 weeks, mated, and exposed for 19 days of gestation (dg). Pregnant rabbits were exposed 7 hours a day for 24 dg. Exposure chamber concentrations were monitored and ranged from 250 to 1,000; 100 to 300; and 20 to 70 parts per million (ppm) for bo, so, and mb, respectively. So concentrations were reduced to 15 to 50 ppm for rabbits. Bo and mb produced little toxic symptomology in rats; bo in both concentrations elevated rabbit mortality values; mb in the higher concentration tested produced severe neurotoxicity and 96 percent mortality. Bo produced minimal embryotoxic effects in rabbits when introduced at concentrations that were maternally toxic. Mb was not notably embryotoxic. An extensive mortality occurred with so exposures at 100 and 300 ppm for rats and rabbits, respecitively. Lower concentrations were adopted for testing. A 50 ppm so inhalation exposure caused death in rabbits at a 79 percent rate and gestational exposure decreased fecundity in rats, increased resorptions in rabbits and decreased fetal weight and length in both animals.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-88-7	EPOXYBUTANE,1,2-
109-99-9	TETRAHYDROFURAN
74-83-9	METHYL BROMIDE
96-09-3	STYRENE OXIDE

PB81-171027
Carcinogenicity and Metabolism of Azo Dyes, Especially Those Derived from Benzidine
National Institute of Occupational Safety and Health
1980, 141 p., PC A07/MF A01
NIOSH PUB No: 80-119, UNAVAIL NIOSH

Abstract: Studies on the sites of carcinogenic action of benzidine (92-87-5) in man and experimental animals, benzidine metabolism, azo compounds metabolism, and the epidemiological experience of industries using azo dyestuffs are reviewed. Industrial hygiene surveys to monitor the environment of workers exposed to azo dyes, monitor urinary excretions of aromatic amines and benzidine of those workers, and evaluate the effects of exposure to and the metabolism of azo dyes are described. The author concludes that benzidine derived dyes are potential carcinogens and recommends that other safe dyes be substituted for these dyes when possible.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
92-87-5	BENZIDINE

PB81-193278
Human Exposure to Atmospheric Concentrations of Selected Chemicals
EPA, Research Triangle Park, NC, OAQPS
SRI International
1980, 285p., PC A13/MF A01

Abstract: Population exposure was estimated for four chemicals emitted into the ambient air. The exposure assessments identify types and locations of sources of air population; estimate emissions, ambient concentrations, and surrounding populations; and provide rough, order-of-magnitude estimates of the number of people exposed to various concentrations of the individual chemicals on a nationwide basis.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE

PB81-223547
Extent of Exposure Survey of Methyl Chloride.
National Institute of Occupational Safety and Health
1980, 42 p., PC A03/MF A01
NIOSH PUB No: 80-134, AVAIL NIOSH

Abstract: Industrial exposures to methyl chloride (74-87-3) are discussed. The toxic effects of methyl chloride are reviewed along with analytical procedures for collection and analysis of methyl chloride samples. Several workplaces that use methyl chloride are described, together with various industrial applications of the chemical. Jobs requiring the use of methyl chloride are identified, and current industrial hygiene and safety practices, including engineering controls, work practices, administrative controls, and biological and environmental sampling and control procedures are described. Chemical and physical data for methyl chloride are presented. The results of detailed industrial hygiene surveys at four United States facilities were the chemical is used are included.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
74-87-3	METHYL CHLORIDE

PB81-225278
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Lead
National Institute of Occupational Safety and Health
1978, 211 p., PC A10/MF A01
NIOSH PUB No: 78-158, AVAIL NIOSH
GPO No: 017-033-00306-8, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7439-92-1	LEAD POWDER

PB81-225526
Criteria for a Recommended Standard: Occupational Exposure to Nitroglycerin and Ethylene Glycol Dinitrate
National Institute of Occupational Safety and Health
1978, 223 p., PC A10/MF A01
NIOSH PUB No: 78-167, UNAVAIL NIOSH
GPO No: 017-033-00311-4, $4.75

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
55-63-0	NITROGLYCERINE
628-96-6	ETHYLENE GLYCOL DINITRATE

PB81-225534
Criteria for a Recommended Standard: Occupational Exposure to Nitriles
National Institute of Occupational Safety and Health
1978, 163 p., PC A08/MF A01
NIOSH PUB No: 78-212, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB81-225609
Criteria for a Recommended Standard: Occupational Exposure to N-Alkane Mono Thiols, Cyclohexanethiol, and Benzenethiol
National Institute of Occupational Safety and Health
1978, 129 p., PC A07/MF A01
NIOSH PUB No: 78-213, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
108-98-5 BENZENETHIOL
1569-69-3 CYCLOHEXANETHIOL

PB81-225617
Criteria for a Recommended Standard: Occupational Exposure to Acrylonitrile
National Institute of Occupational Safety and Health
1978, 14 p., PC A02/MF A01
NIOSH PUB No: 78-116, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
107-13-1	ACRYLONITRILE

PB81-225625
Criteria for a Recommended Standard: Occupational Exposure to Carbon Black
National Institute of Occupational Safety and Health
1978, 107 p., PC A06/MF A01
NIOSH PUB No: 78-204, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1333-86-4	CARBON BLACK

PB81-225633
Special Occupational Hazard Review for Benzidine-Based Dyes
National Institute of Occupational Safety and Health
1980, 60 p., PC A04/MF A01
NIOSH PUB No: 80-109, AVAIL NIOSH
GPO: 017-033-00354-8, $4.25

Abstract: Dyes constitute a large and diverse group of chemicals that have diverse applications for imparting color to many types of products. They may be broadly defined as water-soluble chemical substances that contain chromophoric structures and thus may be used to color another substances by becoming attached to it by molecular bonding, adsorption, absorption, or mechanical adherence. The common starting material for the manufacturer of these dyes, benzidine, is acknowledged by both industry and government (Federal Register 39(20):3756-97, January 29, 1974) to cause bladder cancer. This is based on considerable evidence from studies with humans as well as with animals. The carcinogenicity of benzidine was reviewed by Clayson and by Haley. The evidence presented in those reviews demonstrates that both brief and prolonged exposures to benzidine have been associated with the development of bladder cancer in workers.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
92-87-5 BENZIDINE

PB81-225641
Special Occupational Hazard Review and Control Recommendations-Chrysene
National Institute of Occupational Safety and Health
1978, 49 p., PC A04/MF A01
NIOSH PUB No: 78-163, UNAVAIL NIOSH

Abstract: Exposure to chrysene as an isolated chemical presently occurs only in specific occupations, i.e., chrysene synthesis, laboratory experimentation, and possibly in the synthesis of anthraquinone vat dyes. However, chrysene and its derivatives, e.g., certain methylchrysene isomers, along with hundreds of other polycyclic aromatic hydrocarbons (PAH's), are formed during the pyrolysis of organic matter and can occur in any occupational environment where this process takes place. While it has been suggested that 700C is the optimum pyrolytic temperature for PAH-formation, other factors such as the chemical and physical nature of the pyrolyzed material, the presence or absence of oxygen, and the period of time during which the compound is pyrolyzed also determine the amounts and mixtures of various PAH's formed. Chrysene has been detected in many materials which result from, or are used in, industrial processes. Chrysene also has been detected in the ambient atmosphere and in certain food products.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
218-01-9 CHRYSENE

PB81-225658
Criteria for a Recommended Standard: Occupational Exposure to Vanadium
National Institute of Occupational Safety and Health
1977, 150 p., PC A08/MF A01
NIOSH PUB No: 77-222, UNAVAIL NIOSH
GPO No: 017-033-00252-5, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-62-2 VANADIUM

PB81-225690
Criteria for a Recommended Standard: Occupational Exposure to Hydrazines
National Institute of Occupational Safety and Health
1978, 277 p., PC A13/MF A01
NIOSH PUB No: 78-172, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
302-01-2 HYDRAZINE

PB81-226060
Criteria for a Recommended Standard: Occupational Exposure to Antimony
National Institute of Occupational Safety and Health
1978, 125 p., PC A07/MF A01
NIOSH PUB No: 78-216, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-36-0	ANTIMONY

PB81-226508
Criteria for a Recommended Standard: Occupational Exposure to Hydroquinone
National Institute of Occupational Safety and Health
1978, 175 p., PC A09/MF A01
NIOSH PUB No: 78-155, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
123-31-9	HYDROQUINONE

PB81-226516
Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Fluoride
National Institute of Occupational Safety and Health
1976, 182 p., PC A09/MF A01
NIOSH PUB No: 76-143, UNAVAIL NIOSH
GPO No: 017-033-00171-5, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7664-39-3	HYDROGEN FLUORIDE

PB81-226615
Criteria for a Recommended Standard: Occupational Exposure to Diisocyanates
National Institute of Occupational Safety and Health
1978, 138 p., PC A08/MF A01
NIOSH PUB No: 78-215, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-DIISOCY	DIISOCYANATES
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB81-226656
Special Occupational Hazard Review for DDT
National Institute of Occupational Safety and Health
1978, 214 p., PC A10/MF A01
NIOSH PUB No: 78-200, UNAVAIL NIOSH

Abstract: This document on DDT and a companion document prepared for Aldrin/Dieldrin serve as comprehensive reports on three of the most representative compounds of the organochlorine class of insecticides. Together with the NIOSH criteria documents on the four insecticides previously mentioned, the DDT and Aldrin/Dieldrin reports will form the basis for NIOSH recommendations for international occupational health standards. DDT is produced and marketed in the United States but is use is restricted to specified applications by the U.S. Public Health Service and Department of Agriculture and for controlling body lice (37 Federal Register 13369, July 7, 1972). More importantly, DDT is widely used in agriculture and for vector control outside the U.S., although resistance to DDT in agriculture pests has increased since its introduction. Total worldwide use of DDT for the decade 1971-81 is predicted to be 94,000 metric tons/year.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
50-29-3	DDT

PB81-226698
Criteria for a Recommended Standard: Occupational Exposure to Benzyl Chloride
National Institute of Occupational Safety and Health
1978, 98 p., PC A05/MF A01
NIOSH PUB No: 78-182, AVAIL NIOSH
GPO No: 017-033-00316-5, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
100-44-7	BENZYL CHLORIDE

PB81-226987
Special Occupational Hazard Review With Control Recommendations - Trichloroethylene
National Institute of Occupational Safety and Health
1978, 89 p., PC A05/MF A01
NIOSH PUB No: 78-130, UNAVAIL NIOSH

Abstract: This hazard review provides a brief description of the production, uses, toxicity, and metabolism of TCE and a more detailed assessment of TCE's potential as a workplace carcinogen. In addition, the results of a recent survey of industrial vapor degreasing operations, the primary source of occupational exposures to TCE, are presented along with data from other surveys or reviews to document the extent and nature of occupational exposures to TCE and existing control methods.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
79-01-6	TRICHLOROETHYLENE

PB81-227027
Criteria for a Recommended Standard: Occupational Exposure to Methylene Chloride
National Institute of Occupational Safety and Health
1976, 167 p., PC A09/MF A01
NIOSH PUB No: 76-138, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
75-09-2	METHYLENE CHLORIDE

PB81-227084
Criteria for a Recommended Standard: Occupational Exposure to o-Tolidine
National Institute of Occupational Safety and Health
1978, 85 p., PC A05/MF A01
NIOSH PUB No: 78-179, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
119-93-7	DIMETHYLBENZIDINE,3,3'-

PB81-227217
Criteria for a Recommended Standard: Occupational Exposure to Nitric Acid
National Institute of Occupational Safety and Health
1977, 78 p., PC A05/MF A01
NIOSH PUB No: 76-141, UNAVAIL NIOSH
GPO No: 017-033-00169-3, $5.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7697-37-2	NITRIC ACID

PB81-228728
Criteria for a Recommended Standard: Occupational Exposure to Dibromochloropropane
National Institute of Occupational Safety and Health
1978, 14 p., PC A02/MF A01
NIOSH PUB No: 78-115, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
96-12-8	DIBROMOCHLOROPROPANE,1,2-,3-

PB81-229700
Criteria for a Recommended Standard: Occupational Exposure to Glycidyl Ethers
National Institute of Occupational Safety and Health
1978, 205 p., PC A10/MF A01
NIOSH PUB No. 78-166, UNAVAIL NIOSH
GPO No: 017-033-00313-1, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB81-232076
TSCA Chemicals in Commerce Inventory: Regional and State Perspectives (Toxics Integration Information Series 1980)
EPA, Washington, D.C., OPTS
D.L. Kaufman, et al.
Aug 81, 106p, EPA-560/TIIS-81-005, PC A06/MF A01

Abstract: Using the CICIS Inventory it was possible to determine which chemical substances were produced exclusively in each of the 10 EPA regions. Slightly less than 50% of the inventory is region-specific. Confidential Inventory runs do not affect this finding. A regulatory status of the top 440 high production volume chemicals (a production volume range of 10-50 million lbs/yr was selected as a cut-off point) was completed and it appeared that only 95 specific chemical substances were undergoing any sort of assessment, regulation development, or were already regulated. Document will provide the regions guidance in their priority setting.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB81-232969
Toxic Substances Control Act Grants to States (Toxics Integration Information series)
EPA, Washington, DC, OPTS
R.E. Janney
Jun 81, 71p, EPA-560/TIIS-81-003, PC A04/MF A01

Abstract: The report describes State projects funded under section 28 of the Toxic Substances Control Act. Section 28 allows Federal assistance to States wishing to develop toxic substances investigation and control programs. Approximately $4.5 million was awarded, over a three-year period, to nine States--Illinois, Maryland, Michigan, New Jersey, New York, North Carolina, Ohio, Puerto Rico and Wisconsin.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB81-277001
Criteria for a Recommended Standard: Occupational Exposure During the Manufacture and Formulation of Pesticides.
National Institute of Occupational Safety and Health
1978, 440 p., PC A19/MF A01
NIOSH PUB No: 78-174, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB81-277019
Criteria for a Recommended Standard: Occupational Exposure to Epichlorohydrin
National Institute of Occupational Safety and Health
1976, 162 p., PC A08/MF A01
NIOSH PUB No: 76-206, UNAVAIL NIOSH
GPO No: 017-033-00197-9, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-89-8	EPICHLOROHYDRIN

PB82-102476
Potential Atmospheric Carcinogens, Phase 2/3: Analytical Technique and Field Evaluation
EPA, Research Triangle Park, NC, ESRL
Monsanto Research Corp.
D. S. West, et al.
Jun 81, 267p, EPA-600/2-81-106, PC A12/MF A01

Abstract: A sampling system was developed for collecting 20 significant probable or possible atmospheric carcinogens from ambient air. The sampling system is based on a combination of solid sorbent materials consisting of Tenax-GC, Porapak R, and Ambersorb XE-340 arranged in series. Air samples are drawn through the system using a Nutech Model 221-1A pump. The system was evaluated in sampling trips to Los Angeles, Niagara Falls, and Houston. The results for analyses for the 20 selected compounds as well as additional broad scan data are presented. Analyses of the samples were accomplished using thermal desorption of the sorbent materials followed by capillary column gas chromatography/mass spectrometry (GC/MS). A sample collected in Houston was also analyzed using a conventional flame ionization detector, a N-P flame ionization detector, a photoionization detector and an electron capture detector. A comparison of the GC/MS and multidetector GC results was made.

CL-CARCIN CARCINOGENS
EPA ENVIRONMENTAL PROTECTION AGENCY

PB82-111816
Thermal Conversion of Municipal Wastewater Sludge, Phase II: Study of Heavy Metal Emissions
EPA, Cincinnati, OH, MERL
Interstate Sanitation Commission, New York
Sep 81, 96p, EPA-600/2-81-203, PC A05/MF A01

Abstract: The object of this work was to compare and analyze heavy metal emissions associated with the thermal conversion (incineration) processes which can be conducted in a multiple-hearth furnace to dry municipal wastewater (sewage) sludge and reduce its volume by forming an ash or char. Sludge for this project was obtained from Jersey City, New Jersey. It contains about 8 percent solids which were increased to between 40 and 50 percent solid by adding polymer as a filter aid and filtering it in a 4 ft x 4 ft pilot filter press having expandable rubber diaphragm plates. A pilot scale multiple-hearth furnace, .91 m (36 inch) 10 x 6 hearth was used for the thermal conversion process. Sludge was subjected to thermal conversion at the conditions: (1) Incineration at 900C (1625F); (2) Low Temperature Conversion at 700C (1290F) (starved air combustion or pyrolysis); (3) High Temperature Conversion at 900C (1290F) (starved air combustion or pyrolysis). Results indicated that the low temperature conversion substantially retained cadmium, lead, and beryllium in the ash or char when compared to incineration. However, the ash retained far more silver during incineration than it did during high or low temperature conversion.

CL-METAL METALLIC COMPOUNDS
CL-SEWSLUD SEWAGE SLUDGE
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS
7439-92-1 LEAD POWDER
7440-41-7 BERYLLIUM
7440-43-9 CADMIUM

PB82-111840
Special Occupational Hazard Review With Control Recommendations for Ethylene Thiourea
National Institute of Occupational Safety and Health
1978, 82 p., PC A05/MF A01
NIOSH PUB No: 79-109, AVAIL NIOSH

Abstract: Hazards associated with occupational exposure to ethylene--thiourea (96-45-7) (ETU) are reviewed. The chemical and physical properties of ETU are described and worker exposures during manufacture, production, and application are discussed. The extent of occupational exposure to ETU is assessed. The biological effects of ETU are reviewed based on laboratory animal studies. The potential effects of ETU on humans are also considered. The author concludes that ETU is a potential carcinogen and teratogen. Recommendations include worker education regarding the hazards of ETU, use of ETU in encapsulated forms, proper labeling of ETU, and the use of sanitary practices in the workplace.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
96-45-7	ETHYLENE THIOUREA

PB82-115163
Health Assessment Document for Cadmium
EPA, Research Triangle Park, NC,
L. D. Grant, et al.
Oct 81, 362p, EPA-600/8-81-023, PC A16/MF A01

Abstract: This document provides a critical assessment of health effects and public health risks associated with environmental exposure to cadmium (Cd). Sources and routes of exposure are discussed and identified. Dose-effect/ response relationships and populations at special risk are delineated. Cadmium is naturally present in most environmental media. Major anthropogenic sources are: (1) smelting and mining, (2) certain manufacturing processes, and (3) waste disposal operations. Food is the largest environmental source for most humans, although Cd intake from smoking can equal or exceed Cd intake from food. Acute non-lethal exposure is associated with chronic respiratory effects. However, since most environmental exposures to Cd are of a long-term, low-level type, primary emphasis has been placed on discussing effects of such chronic exposure. Cadmium's accumulation in the kidney results renal tubular dysfunction after many years of exposure. Estimates of the concentration of Cd in the renal cortex necessary to induce these effects and estimates of exposure necessary to produce the critical renal concentration vary widely, partially due to individual biological variability. Populations at special risk to Cd are cigarette smokers, as well as the older segments of the population (>50 years of age).

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3339	PRIMARY NONFERROUS METALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB82-117052
Drinking Water and Health. Volume 2.
National Academy of Sciences
1980, 393 p., PC A18/MF A01
ISBN 0-309-02931-7, $16.95

Abstract: Chlorination is the most widely used method for disinfecting water supplies in the United States. It is convenient to use, effective against most waterborne pathogens, and continues disinfectant activity within the distribution system. Chlorination is the standard disinfectant against which others are compared. However, chlorination can result in the formation of trihalomethanes (THM's) and other halogenated hydrocarbons. The discovery that some of these products are carcinogenic for experimental animals has prompted a reexamination of alternate disinfectants and procedures. The comparative effectiveness of 12 disinfectants or processes for inactivating microorganisms were evaluated. Chlorination, ozonization, and the use of chlorine dioxide come closest to meeting the criteria established for a drinking water disinfectant. The ultimate choice among methods will require weighting the disinfectant efficacy against the toxicity of the products produced by the use of a particular method of disinfection. The major objective of the review of disinfectant chemistry is the identification of products that are likely to be formed by the use of specific disinfectants. The identification of known and theorectical products of disinfection is intended to be a guide to those contaminants that might require removal or toxicological evaluation.

CL-ORGANIC ORGANIC COMPOUNDS
CL-RAD RADIATION
HA HEALTH ASSESSMENT
NAS NATIONAL ACADEMY OF SCIENCES
1332-21-4 ASBESTOS
7440-38-2 ARSENIC

PB82-117060
Drinking Water and Health. Volume 3.
National Academy of Sciences
1980, 415 p., PC A19/MF A01
ISBN 0-309-02932-5, $17.50

Abstract: Contents: Executive summary; Epidemiological studies; Problems of risk estimation; Toxicity of selected drinking water contaminants; and the contribution of drinking water to mineral nutrition in humans.

CL-ORGANIC ORGANIC COMPOUNDS
CL-RAD RADIATION
HA HEALTH ASSESSMENT
NAS NATIONAL ACADEMY OF SCIENCES
1332-21-4 ASBESTOS
7440-38-2 ARSENIC

PB82-121336
Source Resolution of Polycyclic Aromatic Hydrocarbons in the Los Angeles Atmosphere: Application of a Chemical Species Balance Method with First Order Chemical Decay
EPA, Research Triangle Park, NC, ESRL
California University, Los Angeles
M.M. Duval, S.K. Friedlander
Sep 81, 65p, EPA-600/2-81-161, PC A04/MF A01

Abstract: The chemical mass balance method which was originally developed for source resolution of chemical elements was extended in this study to chemically reactive compounds in atmospheric aerosols. The basic theoretical equation was reformulated to incorporate atmospheric decay factors for reactive species. The method was tested with selected polycyclic aromatic hydrocarbons (PAH) using source emission data and atmospheric concentrations reported in the literature. Absolute atmospheric concentrations of coronene, benzo(a)pyrene, benzo(e)pyrene, benzo(ghi)pyrene, and anthanthrene measured at 13 sites in the Los Angeles basin were apportioned between automobile and refinery emission sources. Refinery emission patterns of PAH in the Los Angeles basin were computed from an analysis of auto emissions data and ambient data from a refinery area. Rates of atmospheric degradation of the PAH were calculated from an analysis of auto emission and ambient air data. Literature reports on major emissions of PAH from combustion sources were reviewed and evaluated.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
191-07-1	CORONENE
192-97-2	BENZO(E)PYRENE
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
50-32-8	BENZO(A)PYRENE

PB82-136847
Dioxins
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
M.P. Esposito, T.O. Tiernan, F.E. Dryden
Nov 80, 371p, EPA-600/2-80-197, PC A16/MF A01

Abstract: This report deals with a group of hazardous chemical compounds known as dioxins. The extreme toxicity of one of these chemicals, 2,3,7,8-tetrachlor-dioxin (2,3,7,8-TCDD), has been a concern of both scientific researchers and the public for many years. The sheer mass of published information that has resulted from this concern has created difficulties in assessing the overall scope of the dioxin problem. In this report, the voluminous data on 2,3,7,8-TCDD and other dioxins are summarized and assembled in a manner that allows comparison of related observations from many sources; thus, the report serves as a comprehensive guide in evaluation of the environmental hazards of dioxins. Sections 2 and 3 present detailed information on the chemistry and sources of dioxins. Various routes of formation of dioxins are discussed, and the possible presence of dioxins in basic organic chemicals and pesticides is addressed. Section 4 details the development of an analytical method for detecting part-per-trillion levels of dioxins in industrial wastes. Sections 5 through 8 discuss routes of human exposure to dioxins, including accounts of public and occupational exposure, and the health effects, environmental degradation, transport, and disposal of dioxins.

CL-DIOXIN	DIOXIN
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB82-142050
Survey of Cadmium Emission Sources
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Sep 81, 163p, EPA-450/3-81-013, PC A08/MF A01

Abstract: This document presents technical data used to support decision making on the need for listing cadmium under Section 108(a)(1), Section 112(b)(1)(A), or Section 111(b)(1)(A) as required by Section 122 of the Clean Air Act, as amended in 1977. Data are presented describing potential sources of cadmium emissions, control techniques used for cadmium emission control, estimated controlled and uncontrolled cadmium emissions, estimated ambient air quality, and compliance status. The results of special dispersion modeling are presented for incineration, interaction of smelters, and for interaction of sources in the New York City - New Jersey area.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
334	SECONDARY NONFERROUS METALS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB82-152174
Industrial Surface Coating: Appliances - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 193p, EPA-450/3-80-037A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB82-152851
A Review of Standards of Performance for New Stationary Sources - Coal Preparation Plants
EPA, Research Triangle Park, NC, OAQPS
TRW Energy Systems Group
Dec 80, 93p, EPA-450/3-80-022, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE

PB82-152869
Bulk Gasoline Terminals - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 80, 323p, EPA-450/3-80-038A, PC A14/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS
5172	PETROLEUM PRODUCTS, NEC
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
5541	GASOLINE SERVICE STATIONS

PB82-160334
Alkyl Benzenes
National Academy of Sciences
1981, 384 p., PC A17/MF A01
ISBN 0-309-03180-X, $11.00

Abstract: Contents: Sources, uses, emissions, and controls; Physical and chemical properties; Techniques for measurement; Envieronmental disposition; Metabolism of alkyl benzens; Bilogical effects in mammals: toluene, the xylenes, ethylbenzene, and cumene; Bilogical effects in mammals: stryene and styrene oxide; Biological effects of nonmammalian species; Summary and recommendations for future research.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
108-88-3	TOLUENE
1330-20-7	XYLENE
96-09-3	STYRENE OXIDE
98-82-8	CUMENE

PB82-163445
Carcinogenesis Bioassay of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (CAS No. 1746-01-6) in Osborne-Mendel Rats and B6C3F1 Mice (Gavage Study)
National Toxicology Program
Feb 82, 197p, NTP-80-31, PC A09/MF A01

Abstract: A carcinogenesis bioassay of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), a contaminant in several phenoxy herbicides, was conducted by administering TCDD by gavage to Osborne-Mendel rats and B6C3F1 mice for 104 weeks. Fifty rats and mice of each sex were given TCDD suspended in a vehicle of 9:1 corn oil-acetone for 2 days per week for 104 weeks at doses of 0.01, 0.05, or 0.5 g/kg/wk for rats and male mice and 0.04, 0.2, or 2.0 micrograms/kg/wk for female mice. Seventy five rats and 75 mice of each sex served as vehicle controls. One untreated control group containing 25 rats and 25 mice of each sex was present in the TCDD treatment room, and one untreated control group containing 25 rats and 25 mice of each sex was present in the vehicle-control room. All surviving animals were killed at 150 to 108 weeks. Under the conditions of this bioassay 2,3,7,8-tetrachlorodibenzo-p-dioxin was carcinogenic for Osborne Mendel rats, including follicular-cell thyroid adenomas in males and neoplastic nodules of the liver in females. TCDD was also carcinogenic for B6C3F1 mice, inducing hepatocellular carcinomas in males and females and follicular-cell thyroid adenomas in females.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB82-163684
Carcinogenesis Bioassay of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (CAS No. 1746-01-6) in Swiss-Webster Mice (Dermal Study)
National Toxicology Program
Feb 82, 115p, NTP-80-32, PC A06/MF A01

Abstract: A carcinogenesis bioassay was conducted by applying an acetone suspension of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) to the clipped backs of 30 male and female Swiss-Webster mice 3 days per week for 99 or 104 weeks. Similar groups were pretreated with 1 application of 50 micrograms dimethylbenzanthracene (DMBA) in 0.1 ml acetone 1 week before TCDD administration began. Female mice received 0.005 micrograms TCDD per application, and the male mice received 0.001 micrograms TCDD. As vehicle controls, 45 mice of each sex received 0.1 ml acetone three times per week. Thirty animals of each sex were used as untreated controls. Under the conditions of this bioassay, 2,3,7,8-tetrachlorodibenzo-p-dioxin applied to the skin was not carcinogenic for male Swiss-Webster mice (the increase of fibrosarcomas in the integumentary system may have been associated with the skin application of TCDD). TCDD was carcinogenic for female Swiss-Webster mice causing fibrosarcomas in the integumentary system.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB82-180498
Formaldehyde and Other Aldehydes
National Academy of Sciences
1981, 340 p., PC A16/MF A01
ISBN 0-309-03146-X, $16.75

Abstract: This report was prepared at the request of the Environmental Protection Agency by the Committee on Aldehydes, which was appointed by the National Research Council in the Board of Toxicology and Environmental Health Hazards, Assembly of Life Sciences. The Clean Air Act requires that from time to time the Administrator of EPA evaluate the need for air-quality criteria on pollutants that may have adverse effects on man or the environment. This report is to be used by EPA in assessing the need for such criteria on some of the aldehydes. It is intended to identify and characterize the more important aldehydes that pollute the environment, the sources of their emission, their concentrations, their transformation and transport, their effects on the health of animals and humans, and their effects on the aquatic and terrestrial environments. It is not intended to recommend concentrations of polluting aldehydes for use in developing regulations, but rather to evaluate the available data for EPA to use in judging the need for regulatory strategies to control aldehyde pollution. It is hoped that wide dissemination of this report will inform physicians and other health professionals about the health effects of aldhydes and how they may be encountered at hazardoud concentrations in the environment.

CL-ALDEHYD	ALDEHYDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
50-00-0	FORMALDEHYDE

PB82-180563
Indoor Pollutants
National Academy of Sciences
1981, 560 p., PC A24/MF A01
ISBN 0-309-03188-5, $16.25

Abstract: This report is intended to characterize the quality of the indoor environment--primarily with respect to airborne pollutants, although others are discussed--and to determine the potential adverse health effects of indoor pollutants. The charge was to review, compile, and appraise the available knowledge. The Committee has also identified the research needed for abatement of indoor pollution. 'Indoor' refers to the environments in homes, schools, public buildings, and similar spaces to which the public has access; industrial working environments, however, are exluded from consideration here.

CL-IAP INDOOR AIR POLLUTANTS
HA HEALTH ASSESSMENT
NAS NATIONAL ACADEMY OF SCIENCES

PB82-182031
Occupational Hazard Assessment-Criteria for Controlling Occupational Exposure to Cobalt
National Institute of Occupational Safety and Health
1982, PC A06/MF A01
NIOSH PUB No: 82-107, UNAVAIL NIOSH
GPO No: 017-033-00393-9, $5.00

Abstract Not Available

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-48-4 COBALT

PB82-183963
Extent of Exposure Survey of Monochlorobenzene
National Institute of Occupational Safety and Health
1981, 35 p., PC A03/MF A01
NIOSH PUB No: 81-105, AVAIL NIOSH

Abstract: Occupational exposures to monochlorobenzene (108-90-7) (MCB) were surveyed at three chemical companies. Twenty nine persons at company A were involved in the production of MCB; 12 persons in company B were regularly exposed and an additional 56 employees were exposed on an intermittent basis; and 12 hourly employees were regularly exposed in company C. Personal samples and air samples were taken for each job area at all three companies during all of the work shifts. In company A personal exposures to MCB ranged from less than 0.1 to 4.0 parts per million (ppm); in company B from 0.1 to 2.9 ppm; and in company C from below detectable to 1.90 ppm. Concentrations of MCB in all three companies were below current American Conference of Governmental Industrial Hygienists and OSHA permissible limits of 75 ppm MCB. The authors note that company B was operating at low capacity during the survey, and it is unknown if MCB exposure would remain below current permissible limits during full capacity operating conditions.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
108-90-7	MONOCHLOROBENZENE

PB82-186792
Health Assessment Document for Polycyclic Organic Matter
EPA, Research Triangle Park, NC, ECAO
Syracuse University Research Corp.
J. Santodonato, et al.
Feb 79, 492p, EPA-600/9-79-008, PC A21/MF A01

Abstract: The document responds to Section 122 of the Clean Air Act as Amended August 1977, which requires the Administrator to decide whether atmospheric emissions of polycyclic organic matter (POM) potentially endanger public health. This document reviews POM data on chemical and physical properties, atmospheric forms, atmospheric fate and transport, measurement techniques, ambient levels, toxicology, occupational health, and epidemiology. Polycyclic aromatic hydrocarbons (PAH's), such as the carcinogen benzo(a)pyrene (BaP), and their neutral nitrogen analogs are the two POM chemical groups occurring most frequently in ambient air. The major environmental sources of POM's appear to be the combustion or pyrolysis of materials containing carbon and hydrogen. There is general agreement that POM compounds are associated with suspended particulate matter from both mobile and stationary sources, principally respirable particles. Available monitoring data suggest that many POM compounds associated with particulate matter probably are stable in ambient air for several days. The major health concern over exposure to POM's is their carcinogenicity POM's gain ready access to the body's circulation either by inhalation, ingestion, or skin contact.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB82-196148
Feasibility of Developing Source Sampling Methods for Asbestos Emissions
EPA, Research Triangle Park, NC, ESRL
Battelle Columbus Labs
W. M. Henry, et al.
Apr 82, 70p, EPA-600/3-82-008, PC A04/MF A01

Abstract: The objective of this program was to determine the feasibility of developing methods for sampling asbestos in the emissions of major asbestos sources: (1) ore production and taconite production; (2) asbestos-cement production, (3) asbestos felt and paper production, and (4) the production of asbestos-containing friction materials. Potential sampling methods must provide samples compatible with the provisional analysis methods using electron microscopy (U.S. EPA Report No. 600/2-77-178). Two general criteria of source sampling methods were identified as: (1) the sampling method must be capable of collecting a representative sample and (2) the asbestos emissions must be collected in such a manner that they can be analyzed by the provisional analytical method. Concurrent investigations of potential emissions in the industries and of current knowledge of sampling fibers were undertaken to assess the feasibility of meeting the firt criterion. The industry survey revealed that asbestos emissions can be divided into two classes: stack and fugitive. With respect to the second criterion, it is not feasible to undertake a methods development program for strict compatibility with the recommended procedure of the provisional analytical method.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
1332-21-4	ASBESTOS

PB82-200460
Phosphate Rock Plants - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 82, 48p, EPA-450/3-79-017B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK

PB82-202490
Lead-Acid Battery Manufacture - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 59p, EPA-450/3-79-028B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
36	ELECTRIC AND ELECTRONIC EQUIPMENT
369	MISC. ELECTRICAL EQUIPMENT & SUPPLIES
3691	STORAGE BATTERIES

PB82-202573
Fossil Fuel Fired Industrial Boilers - Background Information. Volume 1: Chapters 1-9
EPA, Research Triangle Park, NC, OAQPS
Mar 82, 553p, EPA-450/3-82-006A, PC A24/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN

PB82-202581
Fossil Fuel Fired Industrial Boilers - Background Information. Volume 2: Appendices
EPA, Research Triangle Park, NC, OAQPS
Mar 82, 331p, EPA-450/3-82-006B, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMAN

PB82-203209
Nonfossil Fuel Fired Industrial Boilers: Background Information
EPA, Research Triangle Park, NC, OAQPS
Mar 82, 791p, EPA-450/3-82-007, PC A99/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMAN

PB82-212895
Workshop on Exposure to Environmental Agents, Their Metabolism, and Mechanisms of Toxicity: Research Needs
EPA, Washington, DC, ORD
Geomet Technologies, Inc.
Aug 81, 138p, PC A07/MF A01

Abstract: The report is the product of a workshop sponsored by the Task Force on Environmental Cancer and Heart and Lung Disease. It contains 72 recommendations for basic and applied environmental research, which were developed through a consensus of scientific experts from Government, industry and academia. Research needs are identified in the following areas: accessing Federal data systems for epidemiological research; improving analytical techniques for monitoring and accessing human exposures; understanding mechanisms of activation and detoxification of environmental pollutants in animals and humans; examining the interactions of environmental pollutants with macromolecules, such as DNA; and understanding the repair and replicative processes, and gene expression as possible common toxicological events in cancer and heart and lung disease.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT

PB82-217126
Fugitive Emission Sources of Organic Compounds - Additional Information on Emissions, Emission Reductions, and Costs
EPA, Research Triangle Park, NC, OAQPS
Apr 82, 258p, EPA-450/3-82-010, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMAN
28 CHEMICALS AND ALLIED PRODUCTS

PB82-221870
Risk and Decision Making: Perspectives and Research
National Academy of Sciences
Mar 82, 77p, PC A05/MF A01
Publication-on-demand, $10.00

Abstract: The report examines changing perceptions of risk, the apparent increased public concern with risk and the possible causes, offers a taxonomy of various risks, from self-hazardous behavior to risks generated by government policies, and discusses a variety of tactics for coping with these categories of risk. The ways in which risks are generated and coped with are outlined. The report divides risk analysis into two parts, assessment and evaluation, examines the respective roles of each, and the techniques for integrating them. There is considerable emphasis on the modalities within which the assessments of risks are done, including the role of scientists in that work as well as the usefulness of committees as a mechanism.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

PB82-227372
Carcinogen Assessment Group's Final Report on Population Risk to Ambient Benzene Exposures
EPA, Research Triangle Park, NC, OAQPS
R. E. Albert
Jan 79, 46p, EPA-450/5-80-004, PC A03/MF A01

Abstract: This report is one of three reports which were prepared by Environmental Protection Agency to determine what regulatory action should be taken by EPA to control sources of atmospheric emissions of benzene. This report estimates from three epidemiological studies the leukemia risk associated with current general population exposures to benzene in the United States.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
71-43-2	BENZENE

PB82-230608
Field Tests of Industrial Coal Stoker Fired Boilers for Inorganic Trace Element and Polynuclear Aromatic Hydrocarbon Emissions
EPA, Research Triangle Park, NC, IERL
KVB, Inc.
J.O. Burlingame, et al.
Oct 81, 349p, EPA-600/7-81-167, PC A15/MF A01

Abstract: The report gives results of 23 tests for 21 polynuclear aromatic hydrocarbons (PAHs) and 74 inorganic trace elements in the effluent of 11 coal stoker fired boilers. The results were obtained from data gathered by analysis of the catch collected from the Source Assessment Sampling System (SASS) train, for collection of particulate and volatile matter in addition to gaseous samples. SASS tests were conducted in accordance with EPA Level 1 guidelines, which provide only preliminary emissions data, to help identify problem areas. In addition to test results, the report describes the facilities tested, coals fired, test equipment and procedures, analytical procedures involved for organic and inorganic analysis, and data reduction.

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB82-231325
Technical Assistance in Support of Permitting Activities for the Thermal Destruction of PCBs
EPA, Research Triangle Park, NC, IERL
GCA Corp.
R.G. Mcinnes
Oct 81, 78p, EPA-600/2-81-240, PC A05/MF A01

Abstract: The report describes phased efforts to identify, evaluate, and provide technical permitting assistance to utility boilers considering thermally destroying PCB-contaminated mineral oil. The project also required that State and Local Governments be provided information needed to air permitting of a PCB verification burn.

CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB82-234618
Sampling for High-Molecular-Weight Organic Compounds in Power Plant Stack Gases
EPA, Research Triangle Park, NC, ESRL
Southern Research Institute
W. R. Dickson, H. C. Miller, W. J. Barrett
May 82, 50p, EPA-600/7-82-039, PC A03/MF A01

Abstract: The results of laboratory and field investigations of experimental sampling systems intended to collect high-molecular-weight organic compounds from flue gases in coal-fired power plants are presented. The most promising sampling device was a solid sorbent cartridge inserted directly into the flue gas stream and cooled to a temperature just above the dew point by a forced flow of external ambient air. Although certain sorbent materials were shown to be partially effective for the collection of vapors of polynuclear aromatic hydro- carbons at temperatures of 50 to 60C, no completely satisfactory sorbent was found. Ambersorb XE-340, a nonpoplar carbonaceous sorbent, was the most satisfactory of several organic and inorganic sorbent materials tried, but its usefulness was limited by the presence of contaminants that could not be removed. The simplicity of the sampling system and the results obtained suggest that continuing efforts should be made to find a better sorbent material.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB82-241860
PCB Disposal by Thermal Destruction
EPA, Dallas, TX, Region VI
Jun 81, 610p, EPA-906/9-82-003, PC A99/MF A01

Abstract: A report on the sampling, analysis, and consideration of risks and benefits associated with the incineration of polychlorinated biphenyls (PCBs) at two commercial facilities in Deer Park, Texas and El Dorado, Arkansas. Included are a summary, PCB incineration test reports, polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF) emission sampling reports, a PCDD and PCDF analytical chemistry report, air dispersion modeling results, an analysis of risks and benefits, and letters and conditions of approval.

CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
51207-31-9	TETRACHLORODIBENZOFURAN,2,3,7,8-
53469-21-9	POLYCHLORINATED BIPHENYLS

PB82-242256
Assessment of Human Exposures to Atmospheric Acrylonitrile
EPA, Research Triangle Park, NC, OAQPS
SRI International
B. E. Suta
Aug 79, 284p, PC A13/MF A01

Abstract: This report is one in a series that SRI International is providing for the U.S. Environmental Protection Agency to estimate the population- at-risk to selected pollutants. Primarily, this study has sought to estimate environmental exposure of the U.S. population to atmospheric acrylonitrile (AN) emissions. The principal atmospheric sources considered in this report are facilities that produce or that use it as a chemical intermediate. Many tables are included.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB82-242611
Primary Aluminum. Background Information: Proposed Amendments
EPA, Research Triangle Park, NC, OAQPS
Aug 78, 71p, EPA-450/2-78-025A, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB82-247594
Environmental Implications of Changes in the Brominated Chemicals Industry
EPA, Washington, DC, ORD
Winzler and Kelly
L.W. Margler
Apr 82, 148p, EPA-600/8-82-020, PC A07/MF A01

Abstract: In light of the large-scale changes occurring within the bromine-based chemicals industry, the U.S. Environmental Protection Agency commissioned a study to investigate the potential for adverse environmental effects that might result from such changes. In particular, EPA was interested in learning if the existing excess capacity to produce bromine and ethylene dibromide has or would stimulate the industry to seek alternative uses for bromine that could result in new environmental concerns. An extensive literature review was conduc-ted, followed by personal contacts with knowledgeable individuals and by independent analysis, with concentration on present and future markets, exposure potential, and risk assessment. The study indicates, in general, that the environmental effects resulting from changes in the industry are relatively minor or that the potential problems have already been recognized and are being addressed by EPA. However, several areas do require further attention: the brominated flame retardants industry; the effect of methyl bromide on stratospheric ozone; the lack of carcinogenicity and food-residue data for methyl bromide; the environmental effects of bromine chloride utilization; chemicals used for petroleum production; vinyl bromide risk assessment; and thallium bromide optical fibers.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
106-93-4	ETHYLENE DIBROMIDE
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
286	INDUSTRIAL ORGANIC CHEMICALS

PB82-249244
Drinking Water and Health. Volume 4.
National Academy of Sciences
1982, 299 p., PC A14/MF A01
ISBN 0-309-03198-2, $16.50

Abstract: This volume focuses on chemical and biological quality associated with drinking water distribution systems and the health effects from exposure to selected drinking water contaminants. It discusses the toxicity of selected chemical contaminants in drinking water and evaluates data concerning both acute and chronic exposure to the selected chemicals. Descriptions of some of the contaminants update information provided in the first three volumes of the series and others provide the first full evaluation of the health effects of certain contaminants.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC

PB82-250234
Human Population Exposures to Coke-Oven Atmospheric Emissions
EPA, Research Triangle Park, NC, OAQPS
SRI International
A. P. Carlin, J. D. Cirvello
Oct 78, 123p, PC A06/MF A01

Abstract: There is a substantial body of evidence, both direct and indirect, that the mixture that coke oven emissions represent is carcinogenic and toxic. Current U.S. Environmental Protection Agency (EPA) policy states that there is no zero risk level for carcinogens. To determine what regulatory action should be taken by EPA on atmospheric emissions of coke ovens, three reports have been prepared: (1) a health effects assessment, (2) a population exposure assessment and (3) a risk assessment document based on the data in the first two assessments. This document is the human population exposure assessment and presents estimates of the number of people in the general population of the United States exposed to atmospheric concentrations of coke ovens emissions. Estimates are provided of population exposures to ambient concentrations of benzo(a)pyrene (BaP) and benzene soluble organics (BSO) material caused by coke oven emissions. Illustrations and tables.

CL-COE	COKE OVEN EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
50-32-8	BENZO(A)PYRENE

PB82-257726
Asphalt Roofing Manufacturing Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 82, 68p, EPA-450/3-80-021B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2952	ASPHALT FELTS AND COATINGS

PB82-258393
Carcinogenesis Bioassay of Vinylidene Chloride (CAS No. 75-35-4) in F344/N Rats and B6C3F1/N Mice (Gavage Study)
National Toxicology Program
May 82, 167p, NTP-80-82, PC A08/MF A01

Abstract: A subchronic and a chronic carcinogenesis study of vinylidene chloride (99% pure), a widely used chemical intermediate and monomer, were conducted in F344/N rats and B6C3F1/N mice. In subchronic studies, groups of 10 rats and 10 mice of either sex were administered vinylidene chloride in corn oil by gavage five times per week at 0, 5, 15, 40, 100, or 250 mg/kg body weight for 13 weeks. At the end of this study, representative tissues from these animals were subjected to histopathological examination. The liver was identified as a target organ for vinylidene chloride toxicity. Under the conditions of this bioassay, vinylidene chloride administered by gavage was not carcinogenic for F344/N rats or B6C3F1/N mice of either sex. However, since the use of a maximum tolerated dose in this study has not been clearly demonstrated and since previously reported studies have shown that carcinogenicity is associated with inhalation exposure to vinylidene chloride, this study should not be taken as proof that the chemical is not a carcinogen.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
75-35-4	DICHLOROETHYLENE,1,1-

PB82-262189
Sampling Air for Gaseous Organic Chemicals Using Solid Adsorbents Applications to Tenax
EPA, Research Triangle Park, NC, EMSL
F. Walling, et al.
Aug 82, 38p, EPA-600/4-82-059, PC A03/MF A01

Abstract: A simple input-output model for a two phase flow system with fixed bed was applied to Tenax adsorption of atmospheric contaminants. The model fit laboratory data acceptably and relationships with previous approaches were stated. Chromatographic retention volumes are used in this model which provides a means of scaling adsorbent bed dimensions and flow rates to preserve desired output characteristics. Suggestions are made about how to use the model for rational sampling design when quantitative information is needed. Practical limitations of field operations and fundamental knowledge and the need to evaluate every datum lead to practical suggestions for sampling. At least two samples collected simultaneously but at very different flow rates are suggested as necessary for quantitative work.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB82-922903
DDT and Its Metabolites in Carcinogenesis
National Cancer Institute
1982, 63 p., $5.25/MF $3.00

Abstract: Oncology Overviews are a service of the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, intended to facilitate and promote the exchange of information between cancer scientists by keeping them aware of literature related to their research being published by other laboratories throughout the world. Each Oncology Overview represents a survey of the literature associated with a selected area of cancer research. It contains abstracts of articles which have been selected and organized by researchers associated with the field. Contents: Experimental carcinogenicity studies with DDT; Experimental studies on the metabolic and toxicologic effects of DDT: Effects of DDT in vitro systems: Microsomal enzyme induction by DDT; Experimental studies of the metabolism and distribution of DDT; Epidemiological reports on the effects of exposure to DDT; Environmental occurence, public health issues and regulations concerning DDT; Reviews of DDT and its metabolites in carcinogenesis.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
50-29-3	DDT

PB83-101758
Current Intelligence Bulletin 36 - Silica Flour: Silicosis (Crystalline Silica).
National Institute of Occupational Safety and Health
1981, 11 p., PC A02/MF A01
NIOSH PUB No: 81-137, AVAIL NIOSH

Abstract: The relationship between silica (7631-86-9) flour exposure and development of silicosis is discussed. Development and characteristics of silicosis are described. Industrial uses for silica flour are reviewed and recommended exposure limits are provided. Published reports of silicosis among exposed workers are summarized, and the findings of studies conducted by NIOSH at two silica flour mills are reviewed. Recommendations are included for exposure monitoring, engineering controls, medical surveillance, work practices, personal protective equipment, worker education, and product labeling.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
14808-60-7	QUARTZ (SILICA DUST)

PB83-101766
Current Intelligence Bulletin 34-Formaldehyde: Evidence of Carcinogenicity.
National Institute of Occupational Safety and Health
1981, 15 p., PC A02/MF A01
NIOSH PUB No: 81-111, AVAIL NIOSH

Abstract: Information on the carcinogenicity of formaldehyde (50-00-0) is reviewed. The physical characteristics, and the methods of production and uses of formaldehyde are discussed together with estimates of the extent of industrial exposure. OSHA standards for occupational exposure, which mandate an 8-hour time weighted average of 3 parts per million (ppm) and a 5ppm ceiling, are summarized. Evidence for formaldehyde's toxicity, mutagenicity, and other health effects in humans and laboratory animals is evaluated. Occupations involving formaldehyde exposure, ranges of occupational exposure by industry, major formaldehyde manufacturers, and guidelines for reducing employee exposure, are listed. The author concludes that formaldehyde should be treated as a potential human carcinogen, and recommends that control measures to reduce employee exposures be instituted.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
50-00-0 FORMALDEHYDE

PB83-101774
Current Intelligence Bulletin 37 - Ethylene Dibromide (EDB)
National Institute of Occupational Safety and Health
1981, 16 p., PC A02/MF A01
NIOSH PUB No: 82-105, AVAIL NIOSH

Abstract: Information on the hazards of ethylene-dibromide (106-93-4) (EDB) exposure is reviewed. The production and use of EDB is discussed and exposure standards and guidelines proposed by OSHA, NIOSH, the American Conference of Governmental Industrial Hygienists, and by the California's Division of OSHA are included. Data also is provided on the magnitude of occupational EDB exposure. The results of carcinogenicity tests in laboratory animals, epidemiologic studies of exposed workers, and mutagenicity tests in Drosophila-melanogaster are summarized. The author concludes that EDB is a potential human carcinogen, and recommends a maximum workplace exposure limit of 0.13 part per million.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-93-4 ETHYLENE DIBROMIDE

PB83-105080
Current Intelligence Bulletin Reprints - Bulletins 1 thru 18 (1975 - 1977)
National Institute of Occupational Safety and Health
1978, 130 p., PC A06/MF A01
NIOSH PUB No: 78-127, AVAIL NIOSH

Abstract: The first 18 Current Intelligence Bulletins published since 1975 by NIOSH are presented. Information on chemical and physical properties, uses, toxicity, and recommended exposure limits is presented for chloroprene (126-99-8), trichloroethylene (79-01-6), ethylene-dibromide (106-93-4), chrome (7440-47-3) pigment, ethylene-dibromide (106-93-4), asbestos (1332-21-4), hexamethylphosphoric-triamide (680-31-9), polychlorinated-biphenyls (1336-36-3), 4,4-diaminodiphenylmethane (101-77-9), chloroform (67-66-3), radon (10043-92-2) daughters, dimethylcarbamoyl-chloride (79-44-7), diethylcarbamoylchloride (88-10-8), explosive azide (26628-22-8), inorganic arsenic (7440-38-2), nitorsamines in cutting fluids, precursors of beta-naphthylamine (91-59-8), 2-nitropropane (76-46-9), and acrylonitrile (107-13-1).

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
10043-92-2	RADON
101-77-9	METHYLENEDIANILINE,4,4'-
106-93-4	ETHYLENE DIBROMIDE
107-13-1	ACRYLONITRILE
126-99-8	CHLOROBUTADIENE,2-,1,3-
1332-21-4	ASBESTOS
1336-36-3	POLYCHLORINATED BIPHENYLS
26628-22-8	SODIUM AZIDE
67-66-3	CHLOROFORM
680-31-9	HEXAMETHYLPHOSPHORAMIDE
7440-38-2	ARSENIC
7440-47-3	CHROMIUM
76-46-9	NITROPROPANE,2-
79-01-6	TRICHLOROETHYLENE
79-44-7	DIMETHYLCARBAMYL CHLORIDE
88-10-8	CARBAMOYL CHLORIDE
91-59-8	NAPHTHYLAMINE,2-

PB83-113563
Stationary Internal Combustion Engines. Standards Support and Environmental Impact Statement. Volume I: Proposed Standards of Performance
EPA, Research Triangle Park, NC, OAQPS
Jan 79, 786p, EPA-450/2-78-125A, PC A99/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
35	MACHINERY, EXCEPT ELECTRICAL
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT

PB83-113746
Metallic Mineral Processing Plants - Background Information for Proposed Standards, Volume 1, Chapters 1-9
EPA, Research Triangle Park, NC, OAQPS
Aug 82, 488p, EPA-450/3-81-009A, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-METAL	METALLIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
10	METAL MINING
101	IRON ORES
102	COPPER ORES
103	LEAD AND ZINC ORES
104	GOLD AND SILVER ORES
105	BAUXITE AND OTHER ALUMINUM ORES
106	FERROALLOY ORES, EXCEPT VANADIUM
109	MISCELLANEOUS METAL ORES

PB83-114280
Metallic Mineral Processing Plants - Background Information for Proposed Standards. Volume 2: Appendices
EPA, Research Triangle Park, NC, OAQPS
Aug 82, 328p, EPA-450/3-81-009B, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-METAL	METALLIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
10	METAL MINING
101	IRON ORES
102	COPPER ORES
103	LEAD AND ZINC ORES
104	GOLD AND SILVER ORES
105	BAUXITE AND OTHER ALUMINUM ORES
106	FERROALLOY ORES, EXCEPT VANADIUM
109	MISCELLANEOUS METAL ORES

PB83-118760
Method for Measuring Carbon Fiber Emissions from Stationary Sources
EPA, Research Triangle Park, NC, ESRL
Battelle Columbus Labs
W.M. Henry, C.M. Melton, E.W. Schmidt
Aug 82, 43p, EPA-600/3-82-080, PC A03/MF A01

Abstract: Carbon fibers are highly conductive, lightweight and of small dimensions. When released as emissions from production, manufacturing, processing and disposal sources they may become airborne and disperse over wide areas. If they settle onto electronic or electrical components they can cause malfunctions and damage due to their high electrical conductivity. This research program was initiated to develop techniques to identify and measure carbon fiber concentrations emitted from manufacturing, processing, fabricating and incinerating sources. Its overall objective was to develop a measurement method useful to support possible emission regulatory actions. The method was tested on samples collected from various stationary emission sources and from a pilot-scale in-house incineration facility. The results of these emission measurements are reported.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
36	ELECTRIC AND ELECTRONIC EQUIPMENT
362	ELECTRICAL INDUSTRIAL APPARATUS
3624	CARBON AND GRAPHITE PRODUCTS

PB83-124867
Metal Coil Surface Coating Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 22p, EPA-450/3-80-035B, PC A02/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB83-124941
Industrial Surface Coating: Large Appliances - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 53p, EPA-450/3-80-037B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB83-130294
Chemical Substances Designation. Volume I: Overview and Analysis (Toxic Intergration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 176p, EPA-560/TIIS-82-003, PC A09/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-130302
Chemical Substances Designation. Volume II: EPA (Toxic Integration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 430p, EPA-560/TIIS-82-004, PC A19/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals, integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB83-130310
Chemical Substances Designation. Volume 3: Other Federal Agencies (Toxic Integration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 282p, EPA-560/TIIS-82-005, PC A13/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals, integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB83-130328
Chemical Substances Designation. Volume 4: Designation Matrix (Toxic Integration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 202p, EPA-560/TIIS-82-006, PC A10/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals, integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-133058
Aromatic Amines: An Assessment of the Biological and Environmental Effects
National Academy of Sciences
1981, 324 p., PC A15/MF A01
Publication-on-demand, $25.00

Abstract: Aromatic amines and compounds related through metabolism are used widely in industry. As a result of such applications, they are also dispersed into the environment, thereby creating a potential for human exposure. Four aromatic amines are known to lead to urinary tract cancer in exposed humans, and some are also responsible for the induction of methemoglobinemia. Some other structurally similar amines are carcinogenic to one or more tissues in laboratory animals. This report summarizes the key information concerning the occurrence, analysis, and toxicology of the aromatic amines and then considers six specific amines in detail. The following substances were studied: Aniline, 4,4'-Methylenebis (2-Chloroaniline), 2,4-Diaminotoluene, trifluralin, p-Cresidine, and furazolidone. The following topics are covered: occurrence in the environment, general analysis, metabolism, carcinogenic potency and risk estimation, and epidemiology.

CL-AMINE	AMINES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
101-14-4	CURENE
120-71-8	CRESIDINE,P-
1582-09-8	TRIFLURALIN
62-53-3	ANILINE
95-51-2	CHLOROANALINE,O-
95-80-7	DIAMINOTOLUENE,2,4-

PB83-133066
Selected Aliphatic Amines and Related Compounds: An Assessment of the Biological and Environmental Effects
National Academy of Sciences
1981, 177p, PC A09/MF A01
Publication-on-demand, $16.00

Abstract: The greatest potential of aliphatic amines for the induction of acute and long-term toxic effects arises from their ability to be nitrosated to nitrosamines that are genotoxic with potential for mutagenicity, teratogenicity, and carcinogenicity, among other toxic effects. The report contains chapters on triethanolamine, morpholine, and 2-nitropropane. Triethanolamine is used in industry and in cosmetic preparations. It is also converted by nitrosating agents to N-nitrosodiethanolamine, which has been known for some time to induce cancer in rodents. Morpholine is an industrially important secondary amine that is nitrosated to N-nitrosomorpholine, which is carcinogenic in animals. 2-Nitropropane was selected because of its dispersion into the environment resulting from its use in paints and other coatings.

CL-AMINE	AMINES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
102-71-6	TRIETHANOLAMINE

PB83-134718
Measuring and Comparing the Cost-Effectiveness of EPA Regulatory Efforts to Control Toxics-Related Health Risks. Volume I: Feasibility Study
EPA, Washington, DC, OPTS
ICF, Inc.
Mar 81, 152p, EPA-560/TIIS-82-007, PC A08/MF A01

Abstract: The Office of Toxics Integration of the Environmental Protection Agency undertook this study to examine the conceptual and practical limitations of the application of traditional cost-effectiveness methods to multi-media regulatory analysis and to determine the extent to which these methods may contribute to the integration of EPA's multiple program office controls on toxic chemicals. The goal in developing inter-media air, land, and water cost-effectiveness analysis is to allow comparative evaluation of the various combined alternatives for chemical risk reduction. The key analytical problem in developing an integrated approach is the difficulty of comparing the relative costs and benefits of regulatory proposals (or existing regulations) across media. Conventional benefit measures are usually not feasible to support a multi-media chemical control strategy. Benefit measures must reflect some positive change that is closer in the chain of effects to the ultimate receptors, e.g., units of exposure reduced or specific health risks reduced, than has generally been reflected in past regulations. The study also demonstrates the difficulties in comparing cost data between different Agency control programs.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-134726
Measuring and Comparing the Cost-Effectiveness of EPA Regulatory Efforts to Control Toxics-Related Health Risks. Volume II: Cost-Effectiveness Analysis of EPA Intermedia Priority Pollutants
EPA, Washington, DC, OPTS
ICF, Inc.
Mar 81, 174p, EPA-560/TIIS-82-008, PC A08/MF A01

Abstract: Volume II analyzes specific regulations in order to add substance to the concepts and principles discussed in Volume I and also to begin collection of baseline data which will provide a frame of reference for future analyses.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-136374
As Assessment of the Health Risks of Seven Pesticides Used for Termite Control
National Academy of Sciences
Aug 82, 82p, PC A05/MF A01
Publication-on-demand, $11.50

Abstract: Chlordane, heptachlor, aldrin, dieldrin, lindane, pentachlorophenol, and chlorpyrifos are registered for control of subterranean termites. There have been reports of the presence of some of these termiticides in the air of military housing long after application. Such findings have caused concern of possible adverse health effects among residents. The problem has been related primarily to housing built on poured concrete slabs with heating and cooling ducts in or below the slabs. In this report, the National Research Council's Committee on Toxicology evaluated the key toxicity information on the seven pesticides and compared the human-health risks associated with airborne exposure. The committee concluded that it could not determine a level of exposure to any of the termiticides below which there would be no biologic effects.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
2921-88-2	CHLOROPYRIFOS
309-00-2	ALDRIN
58-89-9	GAMMA-HEXACHLORO-CYCLOHEXANE
60-57-1	DIELDRIN
76-44-8	HEPTACHLOR
87-86-5	PENTACHLOROPHENOL

PB83-136390
Surface Coating of Metal Furniture - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 50p, EPA-450/3-80-007B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
25	FURNITURE AND FIXTURES
251	HOUSEHOLD FURNITURE
2514	METAL HOUSEHOLD FURNITURE
252	OFFICE FURNITURE
2522	METAL OFFICE FURNITURE
253	PUBLIC BUILDING & RELATED FURNITURE
2531	PUBLIC BUILDING & RELATED FURNITURE
259	MISCELLANEOUS FURNITURE AND FIXTURES
2599	FURNITURE AND FIXTURES, NEC

PB83-139535
Development of a Tunable Zeeman Spectrometer for Analysis of Toxic Organic Compounds
EPA, Research Triangle Park, NC, EMSL
California Univ., Berkeley
T. Hadeishi, et al.
Nov 82, 62p, EPA-600/4-82-067, PC A04/MA A01

Abstract: This program was undertaken to investigate the application of a new high resolution ultraviolet-visible absorption technique called tunable atomic line molecular spectroscopy (TALMS) to the detection of a variety of volatile organic molecules of concern to the Environmental Protection Agency. During the first phase of the study a prototype instrument was built and tested to demonstrate the detection of both small (i.e., less than four atoms) and complex molecules. During the second phase a more compact instrument was constructed for delivery to EPA, Research Triangle Park, NC before January, 1982. This second instrument was optimized for the detection of the more complex organic molecules benzene and chlorobenzene.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
108-90-7	MONOCHLOROBENZENE
71-43-2	BENZENE

PB83-142612
Publication Rotogravure Printing - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 46p, EPA-450/3-80-031B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
27	PRINTING AND PUBLISHING
275	COMMERCIAL PRINTING
2754	COMMERCIAL PRINTING, GRAVURE

PB83-153015
Synthetic Fiber Production Facilities - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 375p, EPA-450/3-82-011A, PC A16/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2823	CELLULOSIC MAN-MADE FIBERS
2824	ORGANIC FIBERS, NONCELLULOSIC

PB83-153528
Preliminary Study of Sources of Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
A.J. Miles, G.W. Brooks, L.E. Keller
Aug 82, 322p, EPA-450/5-82-005, PC A14/MF A01

Abstract: The purpose of this study was to analyze the severity of inorganic arsenic emissions from seven source categories including primary copper, lead, and zinc smelting, cotton ginning, glass manufacturing, and arsenic chemical manufacturing. The magnitude of arsenic emissions from each source category were quantified and control systems were investigated to determine baseline and estimated best control (EBC) for arsenic. The environmental, energy, and economic costs of implementing EBC, in source categories where it is not being used, were estimated. Two source categories, primary lead smelting and arsenic chemical manufacturing, were determined to have EBC in place as a result of compliance with existing regulations. The number of people exposed to arsenic from each of the source categories will be assessed separately by EPA using emissions and stack data generated in this study. The physical and chemical characteristics of arsenic and their impact on the control of arsenic emissions from the source categories were also examined.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
SA	SOURCE ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0724	COTTON GINNING
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3334	PRIMARY ALUMINUM
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC

PB83-154609
Occupational Health Guidelines for Chemical Hazards
National Institute of Occupational Safety and Health
Jan 81, 1565p, PC A99/MF E10
NIOSH PUB No. 81-123, UNAVAIL NIOSH

Abstract: Occupational guidelines on 397 chemicals, minerals, and metals are compiled. Information on permissible exposure limits, chemicals and physical properties, and health hazards is summarized. Recommendations for medical surveillance, respiratory protection, personal protection, and sanitation practices for specific chemicals that are federally regulated are provided. The authors state that implementation of these recommendations will contribute to the development and maintenance of an effective occupational health program.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
RDG	REG DEVELOPMNT GUIDE

PB83-155580
Characterization of Air Particulate Material for Polycyclic Aromatic Compounds
EPA, Research Triangle Park, NC, EMSL
National Bureau of Standards
S.A. Wise, et al.
Jan 83, 59p, NBSIR-82-2595, PC A04/MF A01

Abstract: In studies to evaluate the potential health and ecological effects of atmospheric emissions, bioassays have been employed in conjunction with chemical characterization to correlate mutagenic and/or carcinogenic activity with chemical composition. The complexity of an air particulate extract necessitates the prefractionation of the mixture into suitable subfractures or chemical classes prior to chemical characterization and/or biological testing. The goal of this project was to evaluate such a fractionation scheme for air particulate material with respect to chemical characterization of the various fractions with particular emphasis on the identification of polycyclic aromatic hydrocarbons (PAH). In this study the authors have used three chromatographic approaches to separate, identify, and quantify the complex mixture of PAH extracted from SRM 1649 (Urban Dust/Organics): (1) capillary GC, (2) LC with selective fluorescence detection, and (3) multidimensional chromatographic techniques.

CL-PM PARTICULATE MATTER
CL-POM POLYCYCLIC ORGANIC MATTER
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB83-156935
Measurements of Hazardous Organic Chemicals in the Ambient Atmosphere
EPA, Research Triangle Park, NC, ESRL
SRI International
H.B. Singh, et al.
Jan 83, 99p, EPA-600/3-83-002, PC A05/MF A01

Abstract: Analytical methods were refined and applied to the ambient analysis of 44 organic chemicals, many of which are bacterial mutagens or suspected carcinogens. On-site field collection programs, based on single site studies of 9 to 11 days duration each, were conducted in 10 U.S. cities. Field studies were performed with an instrumented mobile laboratory. A round-the-clock measurement schedule was followed at all sites. The field measurements allowed a determination of atmospheric concentrations, variabilities, and mean diurnal behaviors of the chemicals. The data analyzed relative to theoretically estimated removal rates. Typical diurnal profiles show highest concentrations of the primary pollutants during night time or early morning hours, with minimum concentrations in the afternoon hours. Chemistry plays only a nominal role in defining this diurnal behavior in most cases. Except for aromatic hydrocarbons and aldehydes, average concentrations of the measured species were in the 0- to 5-ppb range. The average concentration range observed for aromatics and aldehydes was 0- to 20-ppb.

CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
TM TECHNICAL MONITORING

PB83-157743
VOC (Volatile Organic Compounds) Fugitive Emissions in Petroleum Refining Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 82, 282p, EPA-450/3-81-015A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB83-163543
Rubber Tire Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 81, 339p, EPA-450/3-81-008A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES

PB83-166488
Revised Standards for Basic Oxygen Process Furnaces: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 82, 381p, EPA-450/3-82-005A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB83-169136
Flexible Vinyl Coating and Printing Operations - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jan 83, 273p, EPA-450/3-81-016A, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
285	PAINTS AND ALLIED PRODUCTS
2851	PAINTS AND ALLIED PRODUCTS

PB83-174268
Animals as Monitors of Environmental Pollutants
National Academy of Sciences
1979, 436p, PC A19/M A01
ISBN 0-309-02871-X, $21.95

Abstract: The report is on the Symposium on Pathobiology of Environmental Pollutants: Animal Models and Wildlife as Monitors. The deleterious effect of pollution on humans and other animals living in highly industrialized urban areas is well recognized and documented whereas there have been fewer studies on the impact of pollution on wildlife. The symposium was organized in an effort to correct this deficiency and had the following goals: (1) to determine the extent to which environmental pollution can be documented in wildlife; (2) to provide a common forum for pathologists, wildlife biologists, and ecologists, who are studying environmental pollution from different perspectives; (3) to develop an informational and bibliographic resource on this important aspect of animal biology; and (4) to generate information that may be useful for legislators involved in fashioning contemporary policy decisions concerning the control of environmental pollution. Areas covered include aquatic pollutants, heavy metals, air pollution, fluoride, and pesticide toxicology.

CL-METAL	METALLIC COMPOUNDS
CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
16984-48-8	FLUORIDES

PB83-176719
Occupational Exposure to Leptophos and Other Chemicals
National Institute of Occupational Safety and Health
1978, 155 p., PC A08/MF A01
NIOSH PUB No: 78-136, UNAVAIL NIOSH
GPO No: 017-033-00287-8, $6.00

Abstract: This publication reports the medical findings regarding the health status of the workers and the results of a reproductive survey of wives of current and former Velsicol Chemical Co. workers in Bayport, Texas. The difficulty in establishing causal relationships when workers are occupationally exposed to multiple chemicals is also discussed. Also included in this report is a special case study evaluation of Velsicol workers allegedly chemically poisoned and previously diagnosed as experiencing severe neurological problems. Some of these workers were examined during this study and the question of permanent damage was considered in relation to their current health status.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
21609-90-5	PHOSPHONOTHIOIC ACID
28	CHEMICALS AND ALLIED PRODUCTS

PB83-177659
Methods for Assessing Exposure to Windblown Particulates
EPA, Washington, D.C., ORD
Dynamac Corp.
Mar 83., 65p, EPA-600/4-83-007, PC A04/MF A01

Abstract: This report reviews and evaluates methods for estimating airborne concentrations of particulates originating from waste disposal sites or similar areas over which toxic materials have been intentionally or inadvertently deposited. The purpose of the work is to identify a model (or models) that can be used to estimate human exposures to windblown toxic particulates from contaminated areas. If subsequent use of these preliminary models indicates serious exposure can occur to toxic particulates from hazardous waste sites, then emission rate measurements from toxic waste disposal sites are recommended for the development of more accurate airborne particulate models.

CL-PM	PARTICULATE MATTER
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-181263
Chloroform, Carbon Tetrachloride, and Other Halomethanes: An Environmental Assessment
National Academy of Sciences
1978, 304 p., PC A14/MF A01
ISBN 0-309-02763-2, $10.25

Abstract: This study assesses the scientific and technical information available on a class of potential multimedia environmental pollutants, the nonfluorinated halomethanes. This class of compounds includes the chlorinated, brominated, and iodinated methanes, and a few compounds containing two different halogens, such as bromodichloromethane. Of these compounds, the report considers chloroform and carbon tetrachloride in the greatest detail, primarily because the data available on these chemicals are more extensive than on other halomethanes, and they have been shown to be carcinogenic when administered in high doses to test animals.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM

PB83-181271
Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents. Volume 1: Anticholinesterases and Anticholinergics
National Academy of Sciences
Jun 82, 292p, PC A13/MF A01
Publication-on-demand, $23.50

Abstract: The Department of the Army asked the National Academy of Science to conduct a study of the possible chronic adverse health effects on servicemen of experimental exposure to various chemicals at U.S. Army Laboratories at Edgewood, Maryland, in about 1958-1975. The Edgewood tests were conducted to learn how specific chemicals may affect humans. Some 6,720 soldiers took part in the program; 254 chemicals were administered by various routes. Chemicals were tested for various military applications. The charge to the two panels was to determine whether, on the basis of the data available, it is possible to demonstrate the likelihood of long-term health effects or delayed sequelae and, if so, whether the involved chemicals, as tested, were likely to produce long-term health effects or delayed sequelae. The report is the first of two on the Edgewood tests. It presents the two panels' tentative conclusions which are based on a review of data obtained from Edgewood, on mortality data organized by the NRC Medical Follow-up Agency, and on separate discussions and papers generated by Panel members.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY

PB83-181289
Identifying and Estimating the Genetic Impact of Chemical Mutagens
National Academy of Sciences
1983, 295 p., PC A14/MF A01
ISBN 0-309-03345-4, $11.50

Abstract: Beginning with a primer on genetics, mutation, mutagens, and the implications of mutagenesis, this useful volume describes a two-tier system of inexpensive, short-term sensitive mutagenicity tests that can be widely applied to identify substances that may represent mutagenic hazard. Suggestions for further research also are included.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PB83-187468
User's Guide for the Automated Inhalation Exposure Methodology (IEM).
EPA, Cincinnati, OH, IERL
Oak Ridge National Lab
F.R. O'Donnell, et al.
Apr 83, 115p, EPA-600/2-83-029, PC A06/MF A01

Abstract: The Inhalation Exposure Methodology (IEM) is a system of computer programs that estimates atmospheric transport of and population exposure to airborne pollutants. This paper discusses the capabilities of IEM and gives detailed instructions for executing the automated, interactive version of IEM that is installed on the IBM system at the National Computer Center, Research Triangle Park, North Carolina. This version uses eight execute (EXEC) programs to assist the user in preparing needed input data files, to direct the flow of input and output data, and to submit the computer programs for execution. Wind speed and direction data contained in Stability Array (STAR) meteorological data files are accessed, prepared, and input to the Industrial Source Complex, Long Term (ISCLT) Disperson Model. This model is then employed to calculate annual-average ground-level air concentrations of pollutants at specified points. These concentrations and site-specific population data are combined by the Concentration-Exposure Program (CONEX) to provide estimates of population exposures to pollutants. All steps required to execute the interactive version of IEM are explained and demonstrated with the aid of a sample problem.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-191403
Volatile Organic Compounds in the Ambient Atmosphere of the New Jersey, New York Area
EPA, Research Triangle Park, NC, ESRL
New Jersey Inst. of Tech, Newark
J.W. Bozzelli, B.B. Kebbekus
Apr 83, 249p, EPA-600/3-83-022, PC A11/MF A01

Abstract: From 1979 through 1981 data were collected on selected volatile organics in the ambient atmosphere of New Jersey and New York. The sites selected included urban, suburban rural, and industrial areas: Newark, Rutherford, South Amboy, Elizabeth, Camden and Batsto Village in New Jersey. In addition, studies were carried out on the sample trapping methodology, as well as on the correlation of the data obtained with wind direction during sampling. Generally, the aromatic compounds, especially benzene, toluene and p-xylene were the most common pollutants found and were usually the most concentrated of the species determined. Levels were usually in the low parts per billion range.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
TM	TECHNICAL MONITORING
108-88-3	TOLUENE
1330-20-7	XYLENE
71-43-2	BENZENE

PB83-192385
Background Information Document Proposed Standards for Radionuclides
EPA, Washington, DC, ORP
Mar 83, 390p, EPA-520/1-83-001, PC A17/MF A01

Abstract: This report presents background information that supports the Environmental Protection Agency's (EPA's) proposed emission standards for radionuclides pursuant to Section 112 of the Clean Air Act. An analysis of public health impacts from the following source categories is presented: (1) Department of Energy (DOE) facilities, (2) Nuclear Regulatory Commission (NRC)-licensed and non-DOE Federal facilities, (3) coal-fired utility and industrial boilers, (4) uranium mines, (5) phosphate industry facilities, and (6) mineral extraction industry facilities. For each source category, the following information is presented: (1) a general description of the source category, (2) a brief description of the processes that lead to the emission of radionuclides into air, (3) a summary of emissions data, and (4) estimates of radiation doses and health risks to both individuals and populations.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB83-192815
Study of Selected State and Local Air Toxics Control Strategies
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
A.S. Pelland, S.J. Call, G.E. Wilkins
Oct 82, 230p, EPA-450/5-82-006, PC A11/MF A01

Abstract: This project was initiated with the objective of providing a report describing state and local programs for controlling toxic air pollutants. The report is designed to serve as a resource for agencies who wish to develop air toxics control strategies. Studies were made of air toxics programs in Michigan, New Jersey, New York, Kentucky, Texas, California, Illinois, and Philadelphia. The report consists of a summary comparing the eight programs and a detailed description of each program. Development of all eight programs was initiated as a result of the recognition of potential adverse health effects resulting from exposure to toxic substances in the ambient air. The programs studied have four general functions in common: (1) air toxics control implemented via existing criteria pollutant permitting systems, (2) collection of information on substances that will be emitted from sources being permitted, (3) determination of the quantity of toxic emissions allowable, and (4) conservation of agency resources in order to focus efforts on the most hazardous emissions of air toxics.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-195503
Volatile Organic Chemicals in the Atmosphere: An Assessment of Available Data
EPA, Research Triangle Park, NC, ESRL
SRI International
R. Brodzinsky, H.B. Singh
Apr 83, 207p, EPA-600/3-83-027A, PC A10/MF A01
For system on magnetic tape, see PB83-195511

Abstract: Significant quantities of organic chemicals are released into the ambient environment as a necessary outcome of day-to-day human activities. In recent years, it has become evident that many of these chemicals are toxic at concentrations significantly higher than those found in the ambient atmosphere. The present study is designed to focus on the abundance of gaseous organic chemicals in the ambient environment with special emphasis on those that are or may be hazardous. The term "hazardous organic chemicals" (HOCs) used here is not intended to imply that a proven human health hazard exists. In most cases toxicity studies are incomplete and entail extrapolation of animal data to humans. Over the years many studies have been conducted to characterize the concentrations of a wide range of potentially hazardous gaseous organic chemicals. This study, for the U.S. Environmental Protection Agency (EPA), was an attempt to study their usefulness and to integrate them into a useful and cohesive document with a single, coherent data base that would readily indicate: Trace chemicals measured, Locations and times of HOC measurements, Typical concentrations of the individual HOCs, and Data quality and representativeness.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING

PB83-195511
Volatile Organic Chemicals in the Atmosphere: An Assessment of Available Data
EPA, Research Triangle Park, NC, ESRL
R. Brodzinsky, H. B. Singh
Mar 83, Mag tape, EPA 600/3-83-027B, PC (Data tape. Contact NTIS for price)

Abstract: Significant quantities of organic chemicals are released into the ambient environment as a necessary outcome of day-to-day human activities. In recent years, it has become evident that many of these chemicals are toxic at concentrations significantly higher than those found in the ambient atmosphere. The present study is designed to focus on the abundance of gaseous organic chemicals in the ambient environment with special emphasis on those that are or may be hazardous. The term "hazardous organic chemicals" (HOCs) used here is not intended to imply that a proven human health hazard exists. In most cases toxicity studies are incomplete and entail extrapolation of animal data to humans. Over the years many studies have been conducted to characterize the concentrations of a wide range of potentially hazardous gaseous organic chemicals. This study, for the U.S. Environmental Protection Agency (EPA), was an attempt to study their usefulness and to integrate them into a useful and cohesive document with a single, coherent data base that would readily indicate: Trace chemicals measured, Locations and times of HOC measurements, Typical concentrations of the individual HOCs, and Data quality and representativeness.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING

PB83-196154
Ambient Acrylonitrile Levels Near Major Acrylonitrile Production and Use Facilities
EPA, Research Triangle Park, NC, EMSL
PEDCo-Environmental, Inc.
S. J. Howie, E. W. Koesters
Apr 83, 154p, EPA-600/4-83-016, PC A08/MF A01

Abstract: In this study, ambient acrylonitrile (AN) levels were measured in the vicinity of two major AN user facilities and two major AN production facilities. Approximately 100 duplicate air samples were collected on charcoal sorption tubes at different locations at or beyond the fenceline of each plant and analyzed by gas chromatography. The data obtained showed a definite presence of AN downwind of each plant. The levels found, which varied from a high of 130 parts per billion (ppb) to trace amounts (below 2.5 ppb) varied considerably depending on the date, the sample location, and the plant tested. The data shows higher levels of AN near use facilities than near production facilities, but factors such as distance from potential AN sources to sampling points may have influenced the results.

SS/AM	SOURCE SAMP/AMB MON
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB83-199190
Industrial Process Profiles for Environmental Use: Chapter 30. The Electronic Component Manufacturing Industry
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
Apr 83, 235p, EPA-600/2-83-033, PC A11/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
36	ELECTRIC AND ELECTRONIC EQUIPMENT

PB83-204107
Nitrates: An Environmental Assessment
National Academy of Sciences
1978, 733 p., PC A99/MF E04
ISBN 0-309-02785-3, $16.75

Abstract: This report concentrates on some specific environmental issues related to nitrates, including, impacts of nitrates on human health, ecological effects of nitrates, and potential depletion of the stratospheric ozone layer by human activities that fix nitrogen, and subsequent effects of such depletion of ozone on man, ecosystems, and climate.

CL-NITRATE	NITRATES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PB83-212043
Ohio River Valley Study. Sites, Methods, Data Summary for 1980.
Volume 1: Main Report
EPA, Research Triangle Park, NC, ESRL
Mead Technology Labs.
R. W. Shaw, R. J. Paur, T. Royal
May 83, 104p, EPA-600/3-83-044A, PC A06/MF A01

Abstract: The Ohio River Valley Study was initiated to gather air quality data at sites representative of regional conditions in an area where current coal usage and projected increases are exceptionally large. These data were intended for use in developing source apportionment calculations to attempt to identify species contributing to fine and coarse particle mass and to identify the major pollution sources responsible for these ambient particles. Special emphasis was also directed to chemical and physical analysis of the aerosols and gases to estimate the impact of emissions from coal-fired power plants on air quality at these Ohio River Valley monitoring sites. This report describes procedures for site location and for station preparation, operation, and periodic audits. Data summaries are presented for the period May through December 1980.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
TM	TECHNICAL MONITORING
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB83-212050
Ohio River Valley Study. Sites, Methods, Data Summary for 1980. Volume 2: Appendices
EPA, Research Triangle Park, NC, ESRL
Mead Technology Labs
R. W. Shaw, R. J. Paur, T. Royal
May 83, 361p, EPA-600/3-83-044B, PC A16/MF A01

Abstract: The Ohio River Valley Study was initiated to gather air quality data at sites representative of regional conditions in an area where current coal usage and projected increases are exceptionally large. This report describes procedures for site location and for station preparation, operation, and periodic audits. Data summaries are presented for the period May through December 1980. Measurements included atmospheric concentrations of nitrogen oxides, sulfur dioxide, ozone, and peroxyacetyl nitrate; local meteorology; aerosol mass and composition; total suspended particulate; and precipitation. Special analysis for speciation of sulfur and aerosols began in December 1980. Measurements of nitric acid and ammonia were made during the summer of 1981; results will be presented in a subsequent report.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
TM	TECHNICAL MONITORING
10028-15-6	OZONE
10102-44-0	NITROGEN DIOXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB83-213843
Chemical Selection Methods: An Annotated Bibliography - Second Edition (Toxics Integration Information Series)
EPA, Washington, DC, OPTS
Tracor JITCO, Inc.
D.E. Meyer, V.L. Halpin
Mar 83, 63p, EPA-560/TIIS-83-003, PC A04/MF A01

Abstract: Persons interested in the control of toxic chemicals have examined and are examining methods to select chemicals of concern from the universe of chemical substances. Chemical selection refers to such activities as priority-setting, ranking, indexing, and sorting. These efforts have included the development of various systematic selection methods, such as scoring systems. This annotated bibliography is intended to provide brief summaries of a variety of chemical selection methods.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-214551
Field Validation of EPA (Environmental Protection Agency) Reference Method 23
EPA, Research Triangle Park, NC, EMSL
Scott Environmental Technology, Inc.
B. Bradd
Jun 83, 53p, EPA-600/4-83-024, PC A04/MF A01

Abstract: The accuracy and precision of U.S. Environmental Protection Agency Reference Method 23 was evaulated at a trichloroethylene degreasing facility and an ethylene dichloride plant. The method consists of a procedure for obtaining an integrated sample followed by gas chromatographic analysis. This study identified a number of conditions such as sunlight and sample volume that may affect the performance of the Method. A paired sampling technique was employed to obtain identical samples, from which the precision and variable interactions could be determined. Certain results fell outside the range of acceptable precision, especially when mylar bags were employed. Modifications to the method are suggested that specify that only Tedlar bags be used for sampling, that incorporate an on-site technique for leak detection, and that discontinue the procedure for moisture removal. With these modifications, Reference Method 23 was fully validated as acceptable for field use.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
79-01-6	TRICHLOROETHYLENE

PB83-215657
Hazardous Air Pollutant Prioritization System (HAPPS)
EPA, Research Triangle Park, NC, OAQPS
Argonne National Lab
A. E. Smith, D. J. Fingleton
Oct 82, 99p, EPA-450/5-82-008, PC A05/MF A01

Abstract: This report presents a preliminary screening technology by which a large number of potentially hazardous compounds can be numerically ranked using readily available information on health effects and release to the ambient air. Factors considered are oncongenicity, mutagenicity, reproduction and developmental toxicity, acute lethality, effects other than acute lethality, production volume, vapor pressure, bioaccumulation and existing standards.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB83-226514
Screening Air Samples for Polynuclear Aromatic Compounds: A Field Study
EPA, Research Triangle Park, NC, EMSL
Oak Ridge National Lab
T. Vo-Dinh, et al.
1983, 17p, EPA-600/D-83-068, PC A02/MF A01

Abstract: The use of simple and cost-effective luminescence techniques for screening air particulate samples is described. Two analytical methods, synchronous luminescence and room temperature phosphorescence, are employed to monitor the content of polynuclear aromatic species in air particulate extracts collected at a wood-burning community. The validity and efficacy of this cost-effective screening approach are demonstrated via comparison of the screening data with results obtained by detailed gas chromatography/mass spectrometry analysis.

CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB83-231357
Personal Exposure to Volatile Organics and Other Compounds Indoors and Outdoors - The TEAM (Total Exposure Assessment Methodology) Study
EPA, Washington, D.C., OMTS
Research Triangle Institute
L.A. Wallace, et al.
Jul 83, 35p, EPA-600/D-83-082, PC A03/MF A01

Abstract: The major objective of this study is to develop and field test a methodology for measuring individual human exposure to toxic substances. A secondary objective is to develop methods for estimating body burden with the use of biological measurements. All significant pathways of exposure are addressed. In Phase 1 of the study, sampling and analytical protocols were tested for volatile organic compounds, organochlorine pesticides, metals, and polyaromatic hydrocarbons. In Phase 2, exposure through air and drinking water and excretion rates through inhaled breath were measured for a statistically valid sample population. It was determined that personal air median concentrations ranged from 40 to 320% higher than outdoor fixed air concentrations. Correlations between personal and outdoor samples were poor. It was concluded that personal air, indoor air, or breath measurements are far superior to outdoor measurements for estimating exposure. The study is currently entering its third phase.

CL-POM	POLYCYCLIC ORGANIC MATTER
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB83-234120
Inorganic Arsenic Emissions from High-Arsenic Primary Copper Smelters - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 402p, EPA-450/3-83-009A, PC A18/MF A01

Abstract: Standards of performance to control emissions of inorganic arsenic from new and existing primary copper smelters processing feed materials containing an annual average of 0.7 percent or greater arsenic are being proposed under Section 112 of the Clean Air Act. This document provides information on the background and authority, regulatory alternatives considered, and environmental and economic impacts of the regulatory alternatives.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC

PB83-234138
Inorganic Arsenic Emissions from Low-Arsenic Primary Copper Smelters - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 490p, EPA-450/3-83-010A, PC A21/MF A01

Abstract: Standards of performance to control emissions of inorganic arsenic from new and existing primary copper smelters processing feed materials containing an annual average of less than 0.7 percent arsenic are being proposed under Section 112 of the Clean Air Act. This document provides information on the background and authority, regulatory alternatives considered, environmental and economic impacts of the regulatory alteratives.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC

PB83-239020
Technical Assistance Document for Sampling and Analysis of Toxic Organic Compounds in Ambient Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs.
R. M. Riggan
Jun 83, 134p, EPA-600/4-83-027, PC A07/MF A01

Abstract: This project had as an objective the development of a Technical Assistance Document (TAD) for sampling and analysis of toxic organic compounds in ambient air. The primary users of this document are expected to be regional, state, and local environmental protection personnel who are faced with the need to determine ambient air quality for regulatory or information gathering purposes. The TAD consists of the following four sections: Introduction, Regulatory Issues Related to Toxic Organic Monitoring, Guidelines for Development of a Monitoring Plan, and Sampling and Analysis State of the Art. A topical index is included to assist the reader in locating the pertinent subject areas within the document.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB83-245175
Directory of Federal and International Coordinating Groups for Toxic Substances, 3rd Edition
EPA, Washington, DC, OPTS
C.A. Allin
May 83, 61p, EPA-560/TIIS-83-004, PC A04/MF A01

Abstract: This directory provides a ready reference to Federal and international toxic chemical coordinating groups. It should facilitate communication among agencies and the groups themselves. Included are committees, task forces, and other groups that coordinate functions of Federal toxic control and testing agencies. There are Federal, State, nonprofit and private sector members on most of these groups. In this third edition, international coordinating groups have been included given the increasing visibility of other countries' activities related to chemicals.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
1332-21-4	ASBESTOS

PB83-247247
Control of Criteria and Non-Criteria Pollutants from Coal/Oil Mixture Combustion
EPA, Research Triangle Park, NC, IERL
Radian Corp.
M.E. Kelly, R.M. Parks, J.H.E. Stelling
Aug 83, 211p, EPA-600/7-83-040, PC A10/MF A01

Abstract: The report summarizes the existing data base on NOx, SO2, and particulate emissions from combustion sources burning coal/oil mixtures (COMs). The need for the U.S. to reduce its dependence on oil and expand its use of coal has prompted a number of industrial and utility energy producers to investigate converting their sites from the exclusive combustion of oil to combustion of COMs. Under contract to EPA and DOE, Radian has identified and evaluated emission control technologies that could be retrofitted to boilers to control criteria and non-criteria air pollutants. The report also gives emissions data for the trace elements As, Be, Cd, Cr, Hg, Ni, Se, and V. It identifies control techniques that can reduce the emissions of these pollutants. These techniques are assessed for their efficiency to reduce the emissions from COM combustion to levels representative of oil firing. Capital costs, operating expense, and overall lifecycle costs are also discussed.

CL-PM	PARTICULATE MATTER
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING
10024-97-2	NITROUS OXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7439-97-6	MERCURY
7440-38-2	ARSENIC
7440-41-7	BERYLLIUM
7440-43-9	CADMIUM
7440-62-2	VANADIUM
7446-09-5	SULFUR DIOXIDE
7782-49-2	SELENIUM COMPOUNDS, AS SE

PB83-256206
Bulk Gasoline Terminals: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 83, 186p, EPA-450/3-80-038B

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS

P883-258103
Draft Environmental Impact Statement. Nonmetallic Mineral Processing Plants: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 485p, EPA-450/3-83-001A, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	DIMENSION STONE
142	CRUSHED AND BROKEN STONE
144	SAND AND GRAVEL
145	CLAY, CERAMIC & REFRACTORY MINERALS
147	CHEMICAL AND FERTILIZER MINERALS
148	NONMETALLIC MINERALS SERVICES
149	MISCELLANEOUS NONMETALLIC MINERALS

P883-259713
Preliminary Environmental Assessment on Formcoke Cokemaking Process
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
D. W. Coy, C. C. Allen, B. N. Carpenter
Aug 83, 70p, EPA-600/7-83-046, PC A04/MF A01

Abstract: The report gives results of a preliminary environmental evaluation and assessment of formcoking. The work is based on readily available literature sources, a plant visit, formcoke plant proposal and feasibility study data, and discussions with engineers and operators involved with formcoking. Material balances, calculations, and engineering judgment were used to convert existing data and information into a form that can be used to compare environmental discharges between formcoking and conventional by-product coking. Comparison results are presented. The lack of environmental data on formcoking is noted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB83-262063
Multimedia Environmental Assessment of Electric Submerged Arc Furnaces Producing Ferroalloys
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
C. W. Westbrook
Sep 83, 265p, EPA-600/2-83-092, PC A12/MF A01

Abstract: The report gives results of sampling and analysis at five ferroalloy plants to determine the amounts of particulates and organics generated during manufacture of several products, the effect of furnace type on the amounts generated, and the amounts of these materials escaping to the environment. Samples were also taken of the influent to and effluent from two plant wastewater treatment systems and groundwater samples around the waste disposal area of one plant. More organics are emitted to the atmosphere than particulates. Open furnaces emit as much as or more organics to the atmosphere than do semi-enclosed furnaces (kg/MW-hr basis).

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3313	ELECTROMETALLURGICAL PRODUCTS

PB83-262071
Characterization of Emissions and Fuel Economy of In-Use Diesel Automobiles
EPA, Research Triangle Park, NC, ESRL
New York State Dept. of Environmental Conservation
R.E. Gibbs, et al.
Sep 83, 188p, EPA-600/3-83-087, PC A09/MF A01

Abstract: Exhaust emissions from twenty 1977-1980 in-use light-duty diesel vehicles were measured to determine the effects of driving cycle, mileage accumulation, and test conditions. Hydrocarbons, CO, CO2, NOx and particulates were measured for the FTP, HFET, CFDS, NYCC, 50 mph cruise (50C) and idle cycles. Particulate extract was tested for mutagenicity by the Ames method. Selected composite extracts were chemically analyzed and bioassayed. Emissions (g/mi) and fuel consumption generally increased in order 50C < HFET < CFDS < FTP < NYCC. A new method for real-time particulate measurement is described using a Tapered Element Oscillating Microbalance (TEOM). Bulk extract samples were fractionated and analyzed by GC, GC/MS and HPLC/UV. The acidic fraction had the highest specific activity, but most total activity was in the neutral fraction which contained fluorenones and oxy-PAH's.

CL-DIESEL	DIESEL
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
4111	LOCAL AND SUBURBAN TRANSIT
413	INTERCITY HIGHWAY TRANSPORTATION
4131	INTERCITY HIGHWAY TRANSPORTATION

PB83-265249
Human Exposure to Atmospheric Concentrations of Selected Chemicals. Volume 2
EPA, Research Triangle Park, NC, OAQPS
Systems Applications, Inc.
G. E. Anderson
Sep 83, 737p, PC A99/MF A01

Abstract: EPA commissioned Systems Applications, Inc. (SAI) to estimate, on a nationwide basis, public exposure to atmospheric concentrations of some forty chemicals. The purpose of the study was to provide EPA with information that would be helpful for determining which of the chemicals to study in more detail and in what order. The emphasis was on estimates that would support rough relative comparisons among the chemicals. There was no intent to define, by a scientifically defensible methodology, actual public exposure and actual ambient air concentrations; the purpose did not warrant the very happy expenditure of funds that would be needed to carry out such a project. The study made free use of such techniques as algorithms for estimating emissions rather than actual emissions data, constructed plant locations rather than actual plant locations, simplified dispersion modeling to estimate ambient air concentrations, and a constructed 'population' file that relied on extrapolation of 1970 Bureau of Census data on where people lived.

CL-ORGANIC ORGANIC COMPOUNDS
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
28 CHEMICALS AND ALLIED PRODUCTS

PB83-922901
Methodology in Use for the Assessment of Carcinogenic Risk. I. Chemical Agents
National Cancer Institute
1983, 85 p., PC A05/MF A01

Abstract: Oncology Overviews are a service of the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, intended to facilitate and promote the exchange of information between cancer scientists by keeping them aware of literature related to their research being published by other laboratories throughout the world. Each Oncology Overview represents a survey of the literature associated with a selected area of cancer research. It contains abstracts of articles which have been selected and organized by researchers associated with the field. Contents: Experimental studies used for the assessment of carcinogenic risk from chemical agents; Epidemiological methods used for the assessment of carcinogenic risk from chemical agents; Combination of methods used for the assessment of carcinogenic risk from chemical agents; Models and mathematical analyses used to evaluate data for the assessment of carcinogenic risk from chemical agents; The role of assessment of carcinogenic risk in the regulation of chemical agents.

CL-CARCIN CARCINOGENS
HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE
RA RISK ASSESSMENT

PB84-100056
Health Assessment Document for Toluene
EPA, Research Triangle Park, NC, ECAO
Syracuse Research Corp.
Aug 83, 427p, EPA-600/8-82-008F, PC A19/MF A01

Abstract: The health effect of primary concern with regard to exposures of humans to toluene is dysfunction of the central nervous system (CNS). Occupational exposures in the range of 200 to 1,500 ppm have elicited dose-related CNS alternations. Although myelotoxicity was previously attributed to toluene, recent evidence indicated that toluene is not toxic to the blood or bone marrow; myelotoxic effects are considered to have been the result of concurrent exposure to benzene. Available evidence is inadequate for assessing the carcinogenic potential of toluene. Although a 24-month inhalation exposure of rates to 300 ppm did not produce any positive carcinogenic effects, various design deficiencies precluded the usefulness of this study in assessing carcinogenic potential. Toluene has been shown to be non-mutagenic in a battery of microbial, mammalian cell, and whole organism test systems. Animal exposure studies suggest that toluene has low teratogenic potential. However, embryotoxicity has been shown to be an endpoint of concern. The reproductive effects of toluene is a category recommended for additional research. Based on available exposure estimates, the only group at possible high risk are workers exposed at or near the threshold limit value (100 ppm).

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
108-88-3	TOLUENE

PB84-101898
Review of New Source Performance Standards for Petroleum Refinery Claus Sulfur Recovery Plants
EPA, Research Triangle Park, NC, OAQPS
Aug 83, 125p, EPA-450/3-83-014, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
7704-34-9	SULFUR

PB84-102540
Human Exposure to Atmospheric Concentrations of Selected Chemicals. Volume 1
EPA, Research Triangle Park, NC, OAQPS
Systems Applications, Inc.
G. E. Anderson
Sep 83, 230p, PC A11/MF A01

Abstract: EPA commissioned Systems Applications, Inc. (SAI) to estimate, on a nationwide basis, public exposure to atmospheric concentrations of some forty chemicals. The purpose of the study was to provide EPA with information that would be helpful for determining which of the chemicals to study in more detail and in what order. The emphasis was on estimates that would support rough relative comparisons among the chemicals. There was no intent to define, by a scientifically defensible methodology, actual public exposure and actual ambient air concentrations; the purpose did not warrant the very happy expenditure of funds that would be needed to carry out such a project. The study made free use of such techniques as algorithms for estimating emissions rather than actual emissions data, constructed plant locations rather than actual plant locations, simplified dispersion modeling to estimate ambient air concentrations, and a constructed 'population' file that relied on extrapolation of 1970 Bureau of Census data on where people lived.

CL-ORGANIC ORGANIC COMPOUNDS
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
28 CHEMICALS AND ALLIED PRODUCTS

PB84-105311
VOC Fugitive Emissions in Synthetic Organic Chemicals Manufacturing Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Feb 83, 482p, EPA-450/3-80-033b, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC ORGANIC COMPOUNDS
CL-VOC VOLATILE ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMAN
28 CHEMICALS AND ALLIED PRODUCTS

PB84-110535
Air Quality Data for Metals 1977 through 1979 from the National Air Surveillance Networks
EPA, Research Triangle Park, EMSL
E. G. Evans, et al.
Oct 83, 309p, EPA-600/4-83-053, PC A14/MF A01

Abstract: The National Air Surveillance Network, which has existed for over 20 years, provides air quality information for many urban and nonurban locations within the United States. The data in this publication were collected with the generous support of the many state and local air pollution control agencies that operate the National Air Surveillance Network stations. Also, the ten EPA Regional Offices have participated in this program since 1973 by sending weighted high volume filters to the centralized laboratory for analysis. This report summarizes the network data for metals determined from high volume samples collected from 1977 through 1979. Concentration values are presented in the form of cumulative frequency distributions. Arithmetic and geometric sample statistics are also reported, as are measures of the precision associated with the analytical methods employed. This report is a continuation in a series of publications of network data.

CL-METAL	METALLIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING

PB84-114354
Vinyl Chloride: A Review of National Emission Standards
EPA, Research Triangle Park, NC, OAQPS
TRW, Inc.
Feb 82, 266p, EPA-450/3-82-003, PC A12/MF A01

Abstract: This VC NESHAP Review Study assesses the current VC regulation through an investigation of emission control techniques and technological developments in the industry. The study encompasses evaluations of existing and new control technologies, sources not regulated by the standard, and enforcement and compliance experience since promulgation of the standard. Information and data evaluated during this study were obtained through literature searches, plant visits, and inter- views with industrial representatives and EPA Regional Office personnel. The results of this review study will form the basis for possible revision of the existing standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE
9002-86-2	POLYVINYL CHLORIDE LATEX

PB84-114834
Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 83, 547p, EPA-450/3-82-001A, PC A23/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS

PB84-114859
Beverage Can Surface Coating Industry--Background Information for Promulgated Standards of Performance
EPA, Research Triangle Park, NC, OAQPS
Aug 83, 53p, EPA-450/3-80-0368, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
34	FABRICATED METAL PRODUCTS
341	METAL CANS AND SHIPPING CONTAINERS
3411	METAL CANS
347	METAL SERVICES, NEC

PB84-116045
Petroleum Dry Cleaners - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 82, 282p, EPA-450/3-82-012A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7215	COIN-OPERATED LAUNDRIES AND CLEANING
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB84-116748
Pressure Sensitive Tape and Label Surface Coating Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 83, 38p, EPA-450/3-80-0038, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2891	ADHESIVES AND SEALANTS

PB84-118843
Health Assessment Document for 1,1,2-Trichloro-1,2,2-Trifluoroethane (Chlorofluorocarbon CFC-113)
EPA, Research Triangle Park, NC, OHEA
R. Carchman, M. Greenberg
Sep 83, 100p, EPA 600/8-82-002, PC A06/MFA01

Abstract: Chlorofluorocarbon 113 (1,1,2-trichloro-1,2,2-trifluoroethane) has little potential to cause direct adverse health effects at levels found or expected in the general environment (<4.2 ppb). Experimental data do not indicate adverse health effects in humans at a TLV of 1,000 ppm. At exposure levels greatly exceeding 1,000 ppm, impairment of neurological and cognitive functions (humans) and detrimental cardiovascular effects (animals) have been observed.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
76-13-1 TRICHLOROTRIFLUOROMETHANE,1,1,2-

PB84-120328
Emission Characterization of Major Fossil Fuel Power Plants in the Ohio River Valley
EPA, Research Triangle Park, NC, ESRL
PEDCo-Environmental, Inc.
G. Baker, et al.
Nov 83, 258p, EPA-600/3-83-109, PC A12/MF A01

Abstract: This study characterizes the atmospheric emissions from five major coal-fired power plant units in the Ohio River Valley between Portsmouth, Ohio, and Louisville, Kentucky. This characterization provides data that are representative of the boiler fuel emission control combinations of the current power plant population as well as those scheduled to go on line before the end of 1983. The Environmental Protection Agency will use this data to determine the impact of existing and planned power plants on air quality in this river valley.

EPA ENVIRONMENTAL PROTECTION AGENCY
TM TECHNICAL MONITORING
49 ELECTRIC, GAS, AND SANITARY SERVICES
491 ELECTRIC SERVICES
4911 ELECTRIC SERVICES

PB84-120641
Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in the Steel Industry--Background Information for Proposed Revisions to Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 83, 412p, EPA-450/3-82-020A, PC A18/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB84-122910
Exhaust Emissions from a Diesel Engine
EPA, Research Triangle Park, NC, ESRL
Johns Hopkins Univ.
T. H. Risby
Nov 83, 113p, EPA-600/3-83-106, PC A06/MF A01

Abstract: Studies were performed using (1) Diesel particles collected from the undiluted exhaust of a single-cylinder engine, operated at constant speed and load, using a binary pure hydrocarbon fuel with air or gas mixture oxiders, and (2) Diesel particles collected from the diluted exhaust of a multicylinder engine operated on a commercial fuel. The physicochemical properties of the particles were determined by static and dynamic methods. The organic adsorbate was characterized by chromatographic and mass spectrometric procedures and by microbial testing protocols. Electron paramagnetic personance spectrometry and high performance liquid chromatography were used to study reactivity of the organic adsorbates. The particles collected from the exhaust of Diesel engines operated on binary pure hydrocarbons and on commercial fuels contained similar compounds in the organic adsorbates. The nitrogen in these compounds is derived mainly from the oxidizer (Air). The microbial mutagenic activities of the organic adsorbates found on the surface of both types of Diesel particles are comparable. These microbial mutagenic activities can be attributed mainly to the presence of nitrated polynuclear aromatic hydrocarbons.

CL-DIESEL	DIESEL
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PNA	POLYNUCLEAR AROMATICS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
35	MACHINERY, EXCEPT ELECTRICAL
351	ENGINES AND TURBINES
3519	INTERNAL COMBUSTION ENGINES, NEC

PB84-124585
Chemical Information Resources Handbook. Second Edition: Toxics Integration Information Series
EPA, Washington, DC, OPTS
Koba Associates, Inc.
D. Kaufman, J. Normandy, J. Pooles
Sep 83, 152p, EPA-560/TIIS-83-006, PC A08/MF A01

Abstract: This handbook describes several of the more important chemical information resources available and accessible through government and private organizations. It also provides a framework for searching and retrieving chemical and environmental data.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB84-128032
Mini-Assessment: Total Exposure Assessment and Exposure-Dose Relationships
EPA, Washington, DC, OER
ICF, Inc.
W.M. Mendez, Jr., K.B. Kolsky, M.C. Gibbs
Dec 83, 158p, EPA-600/6-84-002, PC A08/MF A01

Abstract: This report provides a brief examination of recent (1) research in the areas of total exposure assessment and (2) research concerning the relationship between patterns of exposure to environmental pollutants and dose levels received by exposed individuals and populations. This assessment is intended to provide policy makers with a brief, concise discussion of important trends in recent research; it is not meant to be a comprehensive literature review.

EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB84-128982
Evaluation of Genotoxic Effects in Human Populations
EPA, Research Triangle Park, NC, HERL
M.D. Waters, et al.
1983, 67p, EPA-600/D-84-013, PC A04/MF A01

Abstract: There are demonstrable associations in experimental animals between DNA damage in somatic cells and the development of cancer, and between DNA damage in germ cells and the incidence of genetic disease in offspring. Thus, there is substantial evidence of the need to detect and to quantitate chemically-induced genetic damage in humans in order to assess the potential for cancer and genetic disease. Current methods for estimating human risk of cancer have been based on knowledge of human exposure and epidemiological data. An alternative approach would base such estimates of risk on knowledge of exposure and of damage to the DNA of human cells and tissues. The principal difficulty in performing such assessments lies in the uncertainty of translating information from tests for genetic damage in human cells and tissues into reliable estimates of risk for cancer or genetic disease. This poster concerns: (1) the development of mammalian cell methods that may be used ultimately to evaluate genotoxic effects in humans and (2) our initial attempts to implement a 'parallelogram' approach whereby such methods can be used, collectively, to relate quantitative information on genetic damage to quantitative estimates of risk for cancer or genetic disease.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB84-129683
Airborne Asbestos Levels in Schools
EPA, Washington, DC, OTS
Midwest Research Institute
P.C. Constant, Jr., et al.
Jun 83, 186p, EPA-560/5-83-003, PC A09/MF A01

Abstract: Air (116) and bulk (192) samples were collected from 48 units at 25 different schools of an urban independent school district. These were analyzed respectively by transmission electron microscopy and polarized light microscopy techniques for asbestos fiber concentrations. The new factor of releasability (of fibers) rating resulted from the bulk fiber analysis. Each sampling site was rated by a special five-person team for assessment tools: algorithm, condition, accessibility, part of air moving system, material exposure, friability and water damage, and people's activity at the site. The results were statistically analyzed to document potential exposure to airborne asbestos resulting from the friable, asbestos-containing material in schools and to develop an exposure assessment tool that would be based on the above stated factors.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS

PB84-130442
Analysis of Residential Coal Stove Emissions
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Div.
M. Cooke, et al.
Dec 83, 35p, EPA-600/7-83-060, PC A03/MF A01

Abstract: The report gives results of an evaluation, in cooperation with the State of Vermont's Agency of Environmental Conservation, of emissions generated by antracite and bituminous coal used for residential heating. A residential coal stove was operated with both coals, while comparing high and low burn rate operations. A second stove, a commercial stove designed for wood burning but modified by the manufacturer for coal, was also tested with both coals. Combustion gases were collected by two techniques: evacuated glass bulbs and a Modified Method 5 sampling train. Volatile species were analyzed by direct gas mass spectrometry and by gas chromatography using selective detectors. Polynuclear aromatic hydrocarbons (PAHs) were analyzed by high resolution gas chromatography/mass spectrometry. High levels of particulates, total organics, and sulfur dioxide were found in the emissions from bituminous coal combustion in a residential coal stove. High PAH emissions were found with both bituminous and anthracite combustion. The stove converted from wood to coal burning proved to be highly polluting, especially when used with bituminous coal.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-133347
Process Modifications Towards Minimization of Environmental Pollutants in the Chemical Processing Industry
EPA, Cincinnati, OH, IERL
Illinois Institute of Technology, Chicago
L.L. Tavlarides
Nov 83, 194p, EPA-600/2-83-120, PC A09/MF A01

Abstract: The report covers the development of a matrix of significant pollution problems and attendant process modifications which would have impact on the reduction or elimination of pollutants inherent in these processes. Industries covered are: (1) Refining of Nonferrous Metals; (2) The Electroplating Industry; (3) Coal Conversion Processes; (4) Specialty Chemicals; (5) The Paper & Pulp Industry; (6) Iron and Steel Industry; (7) The Primary Aluminum Industry; and (8) Phosphate Fertilizer Industry. The matrix for each of the industries noted covers the individual process; the pollutants and their sources in the process; the nature of the pollutant and the control strategy for mitigation or reduction of the pollutant.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
262	PAPER MILLS, EXCEPT BUILDING PAPER
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
29	PETROLEUM AND COAL PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB84-137231
Control of Criteria and Non-Criteria Pollutants from Coal/Liquid Mixture Combustion
EPA, Research Triangle Park, NC, IERL
Radian Corp.
J.H.E. Stelling, S.J. Call
Jan 84, 229p, EPA-600/7-84-001, PC A11/MF A01

Abstract: The report summarizes the existing data base on NOx, SO2, and particulate matter emissions from combustion sources burning coal/liquid mixtures (CLMs). It also gives available control techniques that can reduce the emissions of the above pollutants. It assesses these techniques for their efficiency to reduce emissions from CLM combustion to levels representative of oil firing. In addition to the technical evaluations, economic evaluations of control technologies are presented. Capital costs, operating expense, and overall lifecycle costs are discussed. Multipollutant control capabilities of the selected control technologies are assessed, as well as any secondary pollution problems associated with using a particular control technique. Any particular problems with retrofit applications of the devices are highlighted, and any interferences of the control devices with the combustion process are discussed.

CL-PM	PARTICULATE MATTER
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING
10024-97-2	NITROUS OXIDE
10102-44-0	NITROGEN DIOXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB84-138973
In vitro and In vivo Mutagenicity Studies of Environmental Chemicals
EPA, Research Triangle Park, NC, HERL
SRI International
D.C.L. Jones, et al.
Jan 84, 583p, EPA-600/1-84-003, PC A25/MF A01

Abstract: The objectives of this project were to evaluate the mutagenicity of various compounds, mostly pesticides, using microbial and mammalian cell in vitro techniques, as well as in vivo techniques in Drosophila and mice, and to further develop and refine these procedures for application as test batteries. Seventy-nine compounds were evaluated for mutagenicity in one or more of 11 test systems: Salmonella typhimurium plate incorporation assay; E. coli WP-2 reverse mutation assay; S. cerevisiae D3 mitotic recombination assay; Saccharomyces cerevisiae D7 assays; Escherichia Coli, Bacillus subtilis, and S. typhimurium relative toxicity assays; siter-chromatid exchange in Chinese hamster ovary cells assay; L5178Y mouse lymphoma cell forward mutation assay; unscheduled DNA synthesis assay; mouse micronucleus assay; Drosophila sex-linked recessive lethal assay; and mouse dominant lethal assay. The data from the evaluation of 41 pesticides and 10 industrial chemicals are presented in this report. Qualitative interpretations of these data and of data obtained under a previous contract, including those for an additional 28 pesticides, are summarized.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB84-139435
Retrofit Cost Relationships for Hazardous Waste Incineration
EPA, Cincinnati, OH, IERL
Acurex Corp.
K. Lim, et al.
Jan 84, 71p, EPA-600/2-84-008, PC A04/MF A01

Abstract: This study reports a methodology, and an accompanying set of empirical cost relationships, that can be used to estimate the costs of retrofitting/upgrading various components of existing hazardous waste incineration facilities to comply with RCRA performance requirements. Both the methodology and the retrofit cost relationships were intended to focus on major capital additions or subsystem modifications that could be required for RCRA compliance. The results of the study are expressed in a series of empirical relationships between the costs for various capital modifications/additions and factors that significantly impact these costs, e.g., capacity, materials of construction, etc. Costs are developed for (1) various aspects of combustion system retrofit to improve destruction of toxic waste constituents, (2) scrubbing system component addition, replacement, or upgrading to improve particulate and/or HCl removal, and (3) addition or replacement of ancillary equipment mandated by combustion or scrubbing system retrofit. The costs are based on a combination of in-house engineering and vendor-supplied budgetary cost estimates.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-140870
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 1: Pilot Study of Combustion Emissions Variability
EPA, Washington, DC, OTS
Midwest Research Institute
C. Haile, et al.
Jun 83, 317p, EPA-560/5-83-004, PC A14/MF A01

Abstract: This pilot study was conducted as a prelude to a nationwide survey of organic emissions from major stationary combustion sources. The primary objectives of the pilot study were to obtain data on the variability of organic emissions from such sources and to evaluate the sampling and analysis methods. These data are used to construct the survey design for the nationwide survey. The compounds of interest are polynuclear aromatic hydrocarbons (PAHs) and chlorinated aromatic compounds, including polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (PCDDs), and polychlorinated di-benzofurans (PCDFs). Of particular interest is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). In addition total cadmium was also determined in special samples from both plants to meet special Environmental Protection Agency (EPA) needs. A summary of the results of this study is contained in Section 2 of this report. Section 3 presents recommendations for future work. Brief descriptions of the two combustion sources are contained in Section 4. The sampling and analysis methods are described in Sections 5 and 6. Sections 7 and 8 present the field test data and analytical results. The analytical quality assurance results are summarized in Section 9. Section 10 presents the emissions results and Section 11 is a statistical summary of the emissions results.

CL-DIOXIN	DIOXIN
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PCB	POLYCHLORINATED BIPHENYLS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
132-64-9	DIBENZOFURAN
1336-36-3	POLYCHLORINATED BIPHENYLS
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYLS

PB84-141548
Organic Emissions from Ferrous Metallurgical Industries: Compilation of Emission Factors and Control Technologies
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
R. L. Stallings
Jan 84, 119p, EPA-600/2-84-003, PC A06/MF A01

Abstract: The report gives results of a review and analysis of the information and data available in the public domain on organic emissions from the ferrous metallurgy industry, specifically the iron and steel, iron foundry, and ferroalloy industries. Emission sources and information gaps are identified, and the credibility ratings or categories in these industries reported. Organic emission factors for various source categories in these industries are compiled. This report, which reflects accurately the present state of knowledge about organic emissions in the iron and steel, iron foundry, and ferroalloy industries, may be used as a guide to plan and direct programs for further studies, particularly a program to characterize more precisely those classes of organic species (comprising the volatile organic compound category) that are released from the potential sources identifed.

CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
332	IRON AND STEEL FOUNDRIES

PB84-142322
Relative Airborne Losses of Commercial 2,4-D Formulations from a Simulated Wheat Field
EPA, Corvallis, OR, Corvallis Environmental Research Lab
J. D. Gile
83, 8p, EPA-600/J-83-126, PC A02/MF A01

Abstract: The relative airborne losses of seven commercial 2,4-D (2,4-dichlorophenoxyacetic acid) formulations were evaluated in a simulated wheat field. The formulations tested were butyl ester, isooctyl ester, two propylene glycol butyl ether esters, ethanol/isopropyl amine, and two dimethyl amines. The butyl and isoctyl esters exhibited the greatest airborne losses, followed by the propylene glycol butyl ether esters. The amines were nearly nonvolatile. Two to 4 days after application, the 2,5-dichloro-4-hydroxyphenoxyacetic acid metabolite or 2,4-D predominated in all air samples. This material as well as the 2,4-D acid predominated in all plant samples with only traces of the parent esters observed. No extractable 2,4-D related residues were detected in the soil.

CL-AMINE	AMINES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
01	AGRICULTURAL PRODUCTION-CROPS
07	AGRICULTURAL SERVICES
94-75-7	DICHLOROPHENOXYACETICACID,2,4-

PB84-143254
Draft Environmental Impact Statement Sulfur Oxides Emissions from Fluid Catalytic Cracking Unit Regenerators: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jan 84, 343p, EPA-450/3-82-013A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB84-144146
Ambient Concentrations of Polycyclic Organic Matter
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
S. A. Smith
Oct 83, 72p, EPA-450/5-83-010A, PC A04/MF A01

Abstract: This report is released to partially satisfy the requirements of Section 122 of the Clean Air Act, as amended in 1977. This report surveys and summarizes existing published polycyclic organic matter (POM) ambient concentration data.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
TM	TECHNICAL MONITORING

PB84-144153
Sources and Emissions of Polycyclic Organic Matter (POM)
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
M.E. Kelly
Dec 83, 154p, EPA-450/5-83-010B, PC A08/MF A01

Abstract: This report is released to partially satisfy the requirements of Section 122 of the Clean Air Act, as amended in 1977. This report surveys Polycyclic Organic Matter (POM) sources and presents technical data used to support decision making on the need for listing POM under Section 108(a)(1), Section 112(b)(1)(A), or Section 111(b)(1)(A) as required by Section 122 of the Clean Air Act. Data are presented describing potential sources of POM emissions, control techniques used for POM emissions, and estimated POM emissions. A summary of estimated national POM emissions is provided. This summary includes estimates of natural POM emissions.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-145564
Documentation of EMSL-LV (Environmental Monitoring Systems Laboratory-Las Vegas) Contribution to Dallas Lead Study
EPA, Las Vegas, NV, EMSL
K.W. Brown, et al.
Jan 84, 572p, EPA-600/4-84-012, PC A24/MF A01

Abstract: During the summer of 1982 the U.S. Environmental Protection Agency (EPA), conducted a comprehensive multimedia environmental monitoring program in the vicinity of two secondary lead smelters located in Dallas, Texas. This monitoring program, which was conducted within a 1 mile radius of the two smelters, included a major soils investigation and the collection and analysis of approximately 3,000 soil, 1,000 blood, and 750 dust samples. Approximately 250 vegetation samples were also collected. For this study EMSL-LV was requested to provide documentation and guidance for the quality assurance/quality control (QA/QC) program, and to provide the analytical methods and soil sampling procedures protocols. The results of this soil monitoring strategy plus the protocols, reports and pertinent documentation provided by EMSL-LV for the Dallas Lead Study are presented.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
3332	PRIMARY LEAD
7439-92-1	LEAD POWDER

PB84-148295
Criteria for a Recommended Standard: Occupational Exposure to Styrene
National Institute of Occupational Safety and Health
1983, 262 p., PC A12/MF A01
NIOSH PUB No: 82-119, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
100-42-5	STYRENE

PB84-148345
National Symposium on Recent Advances in Pollutant Monitoring of Ambient Air and Stationary Sources, Held at Raleigh, North Carolina May 4-7, 1982
EPA, Research Triangle Park, NC, EMSL
May 83, 402p, EPA-600/9-83-007, PC A18/MF A01

Abstract: The second national symposium to explore recent developments that may improve the state-of-the-art for monitoring techniques was presented by the U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory (EMSL), May 4 through May 7, 1982, at the Mission Valley Inn in Raleigh, North Carolina. The symposium is part of a continuing effort to explore recent advances in pollutant monitoring of ambient air and stationary sources. Approximately 300 engineers and scientists from industry, universities, and control agencies attended the meeting. The symposium served as a forum for exchange of ideas and information. The presentations addressed both source emission monitoring and ambient air monitoring. Included were presentations on gaseous organics, particulate pollutants, and personal monitoring. Also presented were findings relative to sampling and analytical methods as well as to a broad spectrum of organic chemicals in outdoor and indoor air. This publication is intended for those interested in air monitoring and who were unable to attend the symposium. This report includes only those papers submitted voluntarily by speakers. An agenda is included listing all the speakers who participated in the symposium.

CL-IAP	INDOOR AIR POLLUTANTS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-148980
Organic Dyes and Pigments Data Base
EPA, Cincinnati, OH, IERL
SRI International
L. Swett, A. Twhigg, K.E. McCaleb
Jan 84, 52p, EPA-600/2-84-032, PC A04/MF A01

Abstract: The objective of this research program was to compile a data base covering all the commercially significant dyes and pigments produced or imported in the United States. The Organic Dyes and Pigments Data Base (ODPDB) contains the following data elements: chemical-related data (consisting of synonyms, identifiers, and descriptions of manufacturing processes, end uses, and manufacturing wastewater emissions); toxicity data (comprised of NIOSH registry numbers, threshold limit values and various standard test data); economic data on production and sales; and producer-related data (made up of company and plant site identifiers, their locations, and the associated river basins). Data were compiled on 1434 commercial products from a variety of sources, including on-line information retrieval systems, government statistical and research publications, standard industry handbooks, and in-house technical expertise. Correlation of data is accomplished by means of a System 2000 data base management system, which permits retrieval on the basis of various 'key' data elements.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
26	PAPER AND ALLIED PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS

PB84-149137
Rubber-Processing Chemicals Data Base
EPA, Cincinnati, OH, IERL
SRI International
A. Twhigg, et al.
Jan 84, 40p, EPA-600/2-84-030, PC A03/MF A01

Abstract: The objective of this research program was to compile a data base covering all the commercially significant organic rubber-processing chemicals produced or imported in the United States. The Rubber-Processing Chemicals Data Base contains the following elements: chemical information (identification number, chemical names, synonyms, and identifiers); economic information (production, sales, and unit cost); use information; product process information; and chemical producer information (company and plant site identifiers, their locations, and the associated river basins and Air Quality Control Regions). Data were compiled on 327 commercial products from a variety of sources, including on-line information retrieval systems, government statistical and research publications, standard industry handbooks, and in-house technical expertise. Correlation of data is accomplished by means of a System 2000 data base management system, which permits retrieval on the basis of various 'key' data elements.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
302	RUBBER AND PLASTICS FOOTWEAR
303	RECLAIMED RUBBER
304	RUBBER AND PLASTICS HOSE AND BELTING
306	FABRICATED RUBBER PRODUCTS, NEC
50	WHOLESALE TRADE-DURABLE GOODS
501	MOTOR VEHICLES & AUTOMOTIVE EQUIPMENT
5014	TIRES AND TUBES

PB84-149152
Health Assessment Document for Acrylonitrile
EPA, Research Triangle Park, NC, ECAO
D. K. Basu, et al.
Oct 83, 343p, EPA-600/8-82-007F, PC A15/MF A01

Abstract: Acute acrylonitrile intoxication in humans, like many volatile organic compounds, results in irritation of the eyes and nose, weakness, labored breathing, dizziness, impaired judgment, cyanosis, nausea, and convulsions. Unlike many of these other organics, acrylonitrile causes severe burns upon contact with the liquid chemical. Some significant functional disorders of the liver and kidney are observed under subchronic exposure conditions; while chronic exposure results in signs (unhealthy appearance, weight loss and early death) that may be related to the low food and water consumption resulting from the unpleasant taste of acrylonitrile in water. Pathological changes in rats believed to be treatment related include hyperplasia and hyperkeratosis of the squamous cells in the brain and mammary gland hyperplasia in females. The present data base from human and toxicologic studies provides enough evidence such that the International Agency for Research on Cancer (IARC) has characterized acrylonitrile as an animal carcinogen and a likely human carcinogen. Unlike the animal bioassay data, the human data base does not unequivocally demonstrate a causal association.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
107-13-1 ACRYLONITRILE

PB84-149160
Source Receptor Methodology for Some Chlorinated Hydrocarbons
EPA, Research Triangle Park, NC, ESRL
SRI International
F.L. Ludwig, E.M. Liston, L.J. Salas
Jan 84, 71p, EPA-600/3-84-023, PC A04/MF A01

Abstract: A source-receptor methodology is described that can be used to estimate emission rates of halogenated hydrocarbons from a manufacturing plant when access to the plant is not possible. An inert tracer is released at a known rate from a vehicle traveling back and forth on a road outside the plant area. Samples are collected downwind of the plant (at a distance of about 1 to 5 km) and analyzed for the tracer and the materials of interest. The relationship between the emission rates of the tracer and the measured concentrations has been derived. The method is generally insensitive to meteorological conditions, if applied at night or under overcast conditions during the day. It is suitable for estimating fugitive emissions from sources within 10 or 15 m of ground level. Once emission rates have been determined, conventional Gaussian methods may be used to estimate expected maximum ground-level concentrations of the materials of interest downwind of the source area. A suitable manufacturing plant was selected (Vulcan Materials Company near Wichita, Kansas) and the method was applied to estimate emission rates for four different halogenated hydrocarbons. The feasibility of the methodology was demonstrated and suggestions for improvements were made.

CL-CAH CHLORINATED ALIPHATIC HYDROCARBONS
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB84-149368
Inspection and Operating and Maintenance Guidelines for Secondary Lead Smelter Air Pollution Control
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
F. Hall, R. Hawks, G. Saunders
Jan 84, 127p, EPA-600/2-84-026, PC A07/MF A01

Abstract: The prevention of emissions from secondary lead smelters depends upon the procedures implemented to achieve initial compliance and remain in a state of continuing compliance with applicable emission limitations. This manual was developed as an inspection manual incorporating operation and maintenance information for secondary lead smelting. It presents an overview of secondary lead operations, describes typical emission problems associated with the material preparation, smelting, refining and oxidation processes and reviews the potential causes of the problems and possible corrective measures. It also describes the types of air pollution control equipment used in secondary lead smelting operations and typical O&M problems experienced with this equipment. The manual is heavily oriented towards an inspection approach emphasizing techniques to achieve improvements in the status of continuing compliance through operations and maintenance procedures. It has been written for use both as an educational and reference tool by state and local enforcement field inspectors and entry-level engineers whose familiarity with secondary lead operations may be limited, and, as such, can be useful both as a training manual and as a guidebook during field inspections.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
334	SECONDARY NONFERROUS METALS

PB84-151448
SO2 Emissions in Natural Gas Production Standards: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 83, 438p, EPA-450/3-82-023A, PC A19/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
13	OIL AND GAS EXTRACTION
131	CRUDE PETROLEUM AND NATURAL GAS
1311	CRUDE PETROLEUM AND NATURAL GAS
138	OIL AND GAS FIELD SERVICES
1381	DRILLING OIL AND GAS WELLS
7446-09-5	SULFUR DIOXIDE

PB84-151984
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 3: National Survey of Organic Emissions from Coal Fired Utility Boiler Plants
EPA
Midwest Research Institute
C.L.Haile, et al.
Sep 83, 236p, EPA-560/5-83-006, PC A11/MF A01

Abstract: This study was conducted as a part of a nationwide survey to determine organic emissions from major stationary combustion sources. The principal compounds of interest are polynuclear aromatic hydrocarbons (PAHs) and chlorinated aromatic compounds, including polychlorinated biphenyls (PCBs), polychlorinated dibenzo-o-dioxins (PCDDs), and polychlorinated dibenzofurans (PCDFs). This report describes the methods and results of sampling and analysis activities at the seven plants constituting the nationwide survey of coal fired utility boiler plants.

CL-CAH	CHLORINATED ALIPHATIC HYDROCARBONS
CL-DIOXIN	DIOXIN
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PCB	POLYCHLORINATED BIPHENYLS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
132-64-9	DIBENZOFURAN
1336-36-3	POLYCHLORINATED BIPHENYLS
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYLS

PB84-152073
Inorganic Arsenic Emissions from Glass Manufacturing Plants - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 190p, EPA-450/3-83-011A, PC A09/MF A01

Abstract: A national emission standard for glass manufacturing plants is being proposed under authority of Section 112 of the Clean Air Act. The purpose of the proposed standard is to minimize glass manufacturing furnace arsenic emissions to the level which, in the judgment of the Administrator of the U.S. Environmental Protection Agency, provides an ample margin of safety to protect the public health. The standard will have the effect of reducing uncontrolled emissions of arsenic from these furnaces by about 90 percent. Environmental impact and economic impact statements quantifying the impacts of the proposed standard and alternative control options are included in the document.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
7440-38-2	ARSENIC

PB84-153238
Environmental Assessment: Source Test and Evaluation Report - Rectisol
Acid Gas Removal
EPA, Research Triangle Park, NC, IERL
TRW, Inc.
K. W. Crawford, R. A. Orsini
Feb 84, 156p, EPA-600/7-84-014, PC A08/MF A01

Abstract: The report gives results of tests of a Rectisol acid gas removal unit at a Texaco refinery. The primary goal was to provide a data base for evaluation of Rectisol performance in entrained coal gasification applications.

CL-ACID	ACIDIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS/AM	SOURCE SAMP/AMB MON
13	OIL AND GAS EXTRACTION
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB84-154723
Survey of Direct Analysis Methods for Organic Compounds in Particulate Matter
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C. A. Alexander, et al.
Jan 84, 54p, EPA-600/4-84-016, PC A04/MF A01

Abstract: Spark source, secondary ion and direct probe mass spectroscopy and infrared, Raman and photoacoustic optical spectroscopy were evaluated for their present and potential usefulness in direct quantification and semiquantitative analysis of aromatic hydrocarbons in particulate matter.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-154798
Review of New Source Performance Standards for Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Sep 83, 92p, EPA-450/3-83-017, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
262	PAPER MILLS, EXCEPT BUILDING PAPER
7704-34-9	SULFUR

PB84-155126
Equipment Leaks of VOC (Volatile Organic Compounds) in Natural Gas Production Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, OAQPS
Dec 83, 232p, EPA-450/3-82-024A, PC A11/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
13	OIL AND GAS EXTRACTION

PB84-155233
Polycyclic Aromatic Hydrocarbons: Evaluation of Sources and Effects
National Academy of Sciences
1983, 476 p., PC A21/MF A01
Publication-on-demand, $35.50

Abstract: The present report attempts to make current the information relative to the sources (both mobile and stationary), formation, atmospheric transformations, biologic effects, and pharmacokinetics of a select group of polycyclic aromatic hydrocarbons (PAHs) and mixtures thereof, to identify populations hypersensitive to them and to determine the human risks associated with exposure to them. The specific PAHs considered were chosen on the basis of relative concentrations in various kinds of emission or combustion products or because of some unique pharmacologic property.

CL-PNA	POLYNUCLEAR AROMATICS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PB84-155845
Sampling and Analysis Methods for Hazardous Waste Combustion
EPA, Research Triangle Park, NC, IERL
Arthur D. Little, Inc.
J. C. Harris, et al.
Feb 84, 441p, EPA-600/8-84-002, PC A19/MF A01

Abstract: The report is a reference document, describing sampling and analysis methods for measuring the hazardous constituents which might be designated as principal organic hazardous constituents (POHCs) in the various influent and effluent streams of incineration facilities. The methods for these constituents are described in the text. Also included is a concise summary sheet for each recommended method which states the name and number of the method, the types of samples and specific analyses to which the method applies, a brief description of the method, instrument, and operating conditions, and reference(s) to more detailed descriptions of the procedure. Technician-level protocols are thus incorporated by reference, rather than by reproduction in this report. In addition to presenting the methods for sampling and analysis of POHCs at these facilities, information concerning additional sampling and analysis requirements, general strategies for preparing sampling and analysis plans to meet the regulatory requirements, and guidelines for reporting and documentation are discussed.

CL-HAZWAST	HAZARDOUS WASTES
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-156264
Wool Fiberglass Insulation Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 83, 576p EPA-450/3-83-002A, PC A25/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
15	GENERAL BUILDING CONTRACTORS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3296	MINERAL WOOL

PB84-156603
Quantitative Relationship Between Mutagenic and Carcinogenic Potencies: A Feasibility Study
National Academy of Sciences
1983, 43 p., PC A03/MF A01
Publication-on-demand, $ 8.50

Abstract: The report discusses (1) the somatic-mutation theory of cancer, (2) the mutagenicity of carcinogenic compounds and (3) the quantitative correlation between mutagenicity and carcinogenicity. The Committee on Chemical Environmental Mutagens concluded that further research and analysis of data are necessary as a basis for determing whether short-term mutagenicity tests possibly can be used for quantitative prediction of human carcinogenicity.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

PB84-157072
Profile of Existing Hazardous Waste Incineration Facilities and Manufacturers in the United States
EPA, Cincinnati, OH, IERL
MITRE Corp.
E. Keitz, et al.
Feb 84, 167p, EPA-600/2-84-052, PC A08/MF A01

Abstract: A wide variety of technical data pertaining to hazardous waste incinerators has been obtained both from incinerator manufacturers and facilities operating hazardous waste incinerators. This document discusses the data gathering and verification procedures and presents tabulations of the data. It is estimated that there are approximately 350 operational hazardous waste incinerators at 270 facilities in the United States which are subject to regulation under the Resource Conservation and Recovery Act.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-159391
Evaluation of the Feasibility of Incinerating Hazardous Waste in High-Temperature Industrial Processes
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
F.D. Hall, et al.
Feb 84, 260p, EPA-600/2-84-049, PC A12/MF A01

Abstract: In the search for disposal alternatives, the U.S. Environmental Protection Agency is evaluating the potential use of high-temperature processes for the incineration of hazardous wastes. Many kinds of waste have already been disposed of in boilers and cement kilns; this report considers the many other potential processes, such as metallurgical furnaces, brick and lime kilns, glass furnaces, and sewage sludge combustors. Each process is examined against such criteria as time/temperature profile, geographical location, product quality considerations, institutional factors, and environmental impacts. Promising alternatives are identified.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-160266
Multimedia Pollution Assessment of the Wood Products Industries
EPA, Cincinnati, OH, IERL
Jordan (Edward C.) Co., Inc.
J. Casana
Feb 84, 296p, EPA-600/2-81-008, PC A13/MF A01

Abstract: This report presents a summary and commentary on pollutants, abatement technologies, and regulations in the wood products industries. Industries included in the study are pulp, paper and paperboard, veneer/plywood, particleboard, millwork and structural members, fabricated wood products, gum and wood chemicals, and wood preserving. Water pollution abatement legislation has established guidelines based on Best Practicable Control Technology Currently Available (BPCTCA). These guidelines primarily address conventional pollutants, including five-day biochemical oxygen demand (BOD5), total suspended solids (TSS) and pH. In addition, guidelines based on Best Available Technology Economically Achievable (BATEA) and Best Conventional Pollutant Control Technology (BCPCT) are currently being established to address conventional, priority (toxic), and nonconventional (neither conventional nor toxic) pollutants. Existing external air pollution control devices, in conjunction with internal process controls, can be effective in the reduction of air pollutants, especially particulates and sulfur dioxide.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
24	LUMBER AND WOOD PRODUCTS
242	SAWMILLS AND PLANING MILLS
2426	HARDWOOD DIMENSION AND FLOORING
243	MILLWORK, PLYWOOD & STRUCTURAL MEMBERS
2435	HARDWOOD VENEER AND PLYWOOD
2436	SOFTWOOD VENEER AND PLYWOOD
2491	WOOD PRESERVING
2492	PARTICLEBOARD
25	FURNITURE AND FIXTURES
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
263	PAPERBOARD MILLS
264	MISC. CONVERTED PAPER PRODUCTS
2861	GUM AND WOOD CHEMICALS
7446-09-5	SULFUR DIOXIDE
7704-34-9	SULFUR

PB84-161421
Gaseous Emissions from Excess Air Combustion of Explosives and Propellants
EPA, Cincinnati, OH, MERL
IT Enviroscience, Inc.
J. Mahannah, et al.
Feb 84, 31p, EPA-600/2-84-051, PC A03/MF A01

Abstract: The purpose of this short-term project was to determine the levels of nitric oxide (NO), nitrogen dioxide (NO2), and carbon monoxide (CO) in the off-gases from the open burning of explosives in excess air. The ultimate goal is to reduce the level of NO(x), CO, and particulates emitted during the destruction of surplus, waste, and off-spec, explosives. Previous work (DOE) showed that a gravel/sand filter in the roof of a bunker reduced the level of particulates emitted during excess air combustion of propellants (only limited NO(x) or CO measurements were reported). The project demonstrated that the filter is effective in partially eliminating NO and CO emissions, but that additional work, including the incorporation of catalysts in the bed and the introduction of NO-control gases (e.g. NH3), should be undertaken.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
10102-43-9	NITRIC OXIDE
10102-44-0	NITROGEN DIOXIDE
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2892	EXPLOSIVES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
630-08-0	CARBON MONOXIDE

PB84-162841
Feasibility of Assessment of Health Risks from Vapor-Phase Organic Chemicals in Gasoline and Diesel Exhaust
National Academy of Sciences
Oct 83, 68p, PC A04/MF A01
Publication-on-demand, $10.00

Abstract: The Committee was asked to develop a list of organic chemicals identified in the vapor phase in exhaust from diesel- and gasoline-fueled engines and to explore the availability of toxicologic and epidemiologic information on each of them for use in making a quantitative and qualitative assessment of the human health risk associated with exposure to such exhaust. The Committee determined that quantitative risk assessment could probably be applied to only three to five vapor-phase components of diesel exhaust: formaldehyde, benz(a)-anthracene, acrolein, and perhaps 2-nitrofluorene and chrygene. Data on the others seem insufficient for detailed quantitative risk assessment, although comparative risk assessment or qualitative risk assessment would be possible. Readers may find interesting the listings in the appendix of specific chemicals in exhaust of engines as summarized from published literature.

CL-DIESEL	DIESEL
CL-ORGANIC	ORGANIC COMPOUNDS
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
107-02-8	ACROLEIN
218-01-9	CHRYSENE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
50-00-0	FORMALDEHYDE
56-55-3	BENZ(A)ANTHRACENE

PB84-164060
Metallic Mineral Processing Plants - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OHEA
Jan 84, 57p, EPA-450/3-81-009C, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES

PB84-164219
Validation of Chemical and Biological Techniques for Evaluation of Vapors in Ambient Air/Mutagenicity Testing of Twelve (12) Vapor-Phase Compounds
EPA, Research Triangle Park, NC, HERL
Research Triangle Institute
T.J. Hughes, C. Sparacino, S. Frazier
Mar 84, 204p, EPA-600/1-84-005, PC A10/MF A01

Abstract: The overall objective of this research was to further validate Ames mutagenicity preincubation system for detection of vapors in ambient air. Parameters for detection of vapors in the Ames/Salmonella mutagenicity assay were investigated and 12 vapor-phase compounds were tested for mutagenic potential in the above validated protocol with strains TA97, TA98 and TA100, both with and without Aroclor-induced hamster and rat liver S9. The 12 vapor-phase compounds tested were: methylene chloride, formaldehyde, trichloroethylene, ethylene dichloride, epichlorohydrin, nitropropane, nitrobenzene, hydrogen sulfide, butene, propylene, acetylene, and ethylene oxide. Ethylene oxide, epichlorohydrin, ethylene dichloride and methylene chloride were mutagenic.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
106-89-8	EPICHLOROHYDRIN
106-98-9	BUTENE,1-
107-06-2	ETHYLENE DICHLORIDE
115-07-1	PROPYLENE
25167-67-3	BUTENE
50-00-0	FORMALDEHYDE
74-86-2	ACETYLENE
75-09-2	METHYLENE CHLORIDE
75-21-8	ETHYLENE OXIDE
7783-06-4	HYDROGEN SULFIDE
79-01-6	TRICHLOROETHYLENE
79-46-9	NITROPROPANE,2-
98-95-3	NITROBENZENE

PB84-167683
Benzene Emissions from Benzene Storage Tanks: Background Information for Proposal to Withdraw Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 104p, EPA-450/3-84-004, PC A06/MF A01

Abstract: It is proposed to withdraw the proposed National Emission Standards for Hazardous Air Pollutants for the control of Benzene emissions from Benzene Storage Tanks. Previously, standards had been proposed under Section 112 of the Clean Air Act. This document contains background infor- mation considered in the proposed withdrawal of those previously proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

PB84-169325
Chemical and Physical Characterization of Municipal Sludge Incinerator Emissions
EPA, Research Triangle Park, NC, ESRL
R.L. Bennett, K. T. Knapp, D.L. Duke
Mar 84, 58p, EPA-600/3-84-047, PC A04/MF A01

Abstract: Particulate emissions from a group of municipal sludge incinerators, three with multiple-hearth furnaces and one with a fluidized-bed furnace, were characterized. Objectives of the investigation were (1) to obtain specific elemental emission concentrations, and (2) to provide source inventories and source signatures, especially in terms of particle size, that would assist in the development and evaluation of source apportionment models. Three of the plants investigated in this study operated at or near autogenous burning conditions. Chemical element composition was determined for total and sized emission samples by x-ray fluorescence analysis. During this study considerable enrichment of several elements (S, V, Cu, Zn, Cd, Sn and Pb) in the particulate emissions, relative to their content in the sludge, was observed. The largest average enrichment ratios were observed for cadmium (31), zinc (14), lead (9), and sulfur (8).

CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-92-1	LEAD POWDER
7440-31-5	TIN, AS SN
7440-34-9	SULFUR
7440-43-9	CADMIUM
7440-50-8	COPPER
7440-62-2	VANADIUM
7440-66-6	ZINC
7704-34-9	SULFUR

PB84-170042
Protocol for the Collection and Analysis of Volatile POHCs (Principal Organic Hazardous Constituents) Using VOST (Volatile Organic Sampling Train)
EPA, Research Triangle Park, NC, IERL
Envirodyne Engineers, Inc.
E.M. Hansen
Mar 84, 61p, EPA-600/8-84-007, PC A04/MF A01

Abstract: The document is a state-of-the-art operating protocol for sampling and analysis of volatile organic constituents of flue gas from hazardous waste incinerators or other similar combustor systems using the Volatile Organic Sampling Train (VOST). It is intended to be used for guidance by personnel of the regulatory groups, personnel associated with engineering research and development, and the regulated community. The document is in two parts. Part A describes the key components of the train, the procedures for preparing the sorbent materials, and procedures for sample collection using the VOST. Part B describes the procedures for analyzing VOST sorbent cartridges for volatile principal organic hazardous constituents (POHCs) using purge-trap-desorb gas chromatography/mass spectrometry (P-T-D GC/MS). Quality control procedures are presented in both parts.

CL-HAZWAST	HAZARDOUS WASTES
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-170174
Benzene Emissions from Maleic Anhydride Plants: Background Information for Proposal to Withdraw Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 49p, EPA-450/3-84-002, PC A03/MF A01

Abstract: This document contains information that formed the basis for the decision to withdraw standards proposed for the maleic anhydride industry April 18, 1980 (45 FR 26660). The report includes a summary of industry changes since proposal, a summary of public comments relevant to the withdrawal decision, and the rationale for the decision to withdraw proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB84-170182
Carcinogen Assessment of Coke Oven Emissions
EPA, Washington, DC, OHEA
Feb 84, 221p, EPA-600/6-82-003F, PC A10/MF A01

Abstract: Coke oven workers in Allegheny County, Pennsylvania and at 10 non-Allegheny County coke plants in the United States and Canada were found to be at an excess risk of mortality from cancer of all sites and from cancer of the lungs, bronchus, trachea, kidney, and prostate. An important finding of this study was the dose-response found by both length of exposure and intensity of exposure (top or side of the ovens) for mortality from cancer of the lungs, bronchus, and trachea. A study of Japanese coke oven workers also found them to be at an excess risk of lung cancer mortality. British studies of cancer mortality in coke oven workers have generally been negative, but there were weaknesses in these studies. Coke oven emissions produce positive results in mutagenicity studies. Coal tar, a condensate of coke oven emissions, and various constituents of coke oven emissions have been found to be positive in both mutagenicity and animal carcinogenicity studies.

CL-COE	COKE OVEN EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB84-170414
Federal Activities in Toxic Substances. Toxic Integration Information Series
EPA, Washington, DC, OPTS
C. Allin, W. Richardson, J.D. Sandler
Sep 83, 361p, EPA-560/TIIS-83-007, PC A16/MF A01

Abstract: Reprint/revision of 1981 document--describes the toxic substances regulatory activities of 22 offices in 8 Federal agencies or departments. The document covers the breakdown of each organization, summarizes the statutory authorities, highlights regulatory development processes, and describes the various toxics-related programs and activities. There is also a graphic summary of 14 major statutes involved with controlling toxic substances.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB84-170570
Residential Wood Combustion Study. Task 1. Ambient Air Quality Impact Analysis
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, et al.
Sep 82, 49p, EPA-910/9-82-089A, PC A03/MF A01

Abstract: The ambient air quality impact of Residential Wood Combustion (RWC) emissions in eight Pacific Northwest cities was studied during the 1980-81 space heating season. Seventy-seven worst case fine particle ambient samples collected in Seattle, Spokane, Yakima, Tacoma and Longview, Washington; Boise, Idaho; Portland and Medford, Oregon were selected and analyzed for Polynuclear Aromatic Hydrocarbon compounds, 35 trace elements and carbon. The impact of RWC and other sources was determined by Chemical Mass Balance (CMB) calculation and validated against independent carbon-14 measurement. This document describes the project design, methodology and results of the RWC impact monitoring program. The findings of this task form the basis for projections of future RWC impacts discussed under task 2A (PB84-170596) of this series. They also provide the first comprehensive survey of RWC impacts within Pacific Northwest communities during a period likely to be typical of maximum RWC emissions.

CL-IAP INDOOR AIR POLLUTANTS
CL-PM PARTICULATE MATTER
CL-POM POLYCYCLIC ORGANIC MATTER
CL-WOOD WOOD SMOKE
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB84-170588
Residential Wood Combustion Study. Task 1. Ambient Air Quality Impact Analysis. Appendices.
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, et al.
Sep 82, 207p, EPA-910/9-82-089B, PC A10/MF A01

Abstract: The ambient air quality impact of Residential Wood Combustion (RWC) emissions in eight Pacific Northwest cities was studied during the 1980-81 space heating season. Seventy-seven worst case fine particle ambient samples collected in Seattle, Spokane, Yakima, Tacoma and Longview, Washington; Boise, Idaho; Portland and Medford, Oregon were selected and analyzed for Polynuclear Aromatic Hydrocarbon compounds, 35 trace elements and carbon. The impact of RWC and other sources was determined by Chemical Mass Balance (CMB) calculation and validated against independent carbon-14 measurement. This document contains the appendices for this task. The project design, methodology and results of the RWC impacts monitoring program are described in Report No. PB84-170570. The findings of this task form the basis for projections of future RWC impacts discussed under task 2A (PB84-170596) of this series. They also provide the first comprehensive survey of RWC impacts within Pacific Northwest communities during a period likely to be typical of maximum RWC emissions.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS/AM	SOURCE SAMP/AMB MON

PB84-170596
Residential Wood Combustion Study. Task 2A. Current and Projected Air Quality Impacts
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, J.A.Cooper, J.E. Houck
Jan 83, 61p, EPA-910/9-82-089C, PC A04/MF A01

Abstract: This report focuses on the issues of future particulate air quality impact from residential wood combustion (RWC) sources in the Pacific Northwest, the basis for the projections, air resource implications and potential mitigating measures. The intent of this task is to draw together the findings from other portions of the Residential Wood Combustion Study: Task 1 (Ambient Air Quality Impact Analysis), Task 2B (Household Information Survey), and Task 3 (Wood Fuel Use Projections) (Report Nos. PB84-170570, PB84-170604, and PB84-170612). Results developed from Task 6 (Control Strategy Alternatives) and Task 5 (Wood Stove Emission Studies) are discussed within the framework of potential mitigating measures (Report Nos. PB84-170653 and PB84-170638). Current RWC particulate impacts identified as a part of this study, as well as those quantified by other Pacific Northwest aerosol studies, are presented as are air quality projection methodology and impact projection implications.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-PM	PARTICULATE MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170604
Residential Wood Combustion Study. Task 2B. Household Information Survey
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Jun 82, 84p, EPA-910/9-82-089D, PC A05/MF A01

Abstract: Surveys on residential wood combustion practices were conducted in the metropolitan areas of Portland, Oregon, and Seattle and Spokane, Washington, in the spring of 1981. These surveys were part of the Residential Wood Combustion study investigating various aspects of the air pollution impact associated with increasing residential wood burning in the Pacific Northwest. The two major goals were to gather specific data on woodburning activities during February 1981, as well as to gather general data on woodburning practices. The interest in woodburning activity during February was because temporary air monitoring stations were operated in the survey areas during that period. Each survey area was selected to include a one-mile square area around the air monitoring stations, so that the survey information could be correlated to the ambient data. The results of this ambient monitoring study are reported under Task 1 of this project PB84-170570. The survey results are summarized in this report, with the data presented in chart form. The survey methodology, the statistical analyses performed, and the problems encountered are discussed.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS/AM	SOURCE SAMP/AMB MON

PB84-170612
Residential Wood Combustion Study. Task 3. Wood Fuel Use Projection
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
W.T. Greene, R.L. Gay
Dec 82, 146p, EPA-910/9-82-089E, PC A07/MF A01

Abstract: This report analyzes trends in wood fue' use within the city limits of Seattle and Spokane (Washington) and in the greater Portland (Oregon) metropolitan area. Short-term (through 1985) and long-term (through 2000) trend projections are presented. Short-term projections were made based on volumes of firewood removed from the nearest national forest(s) and average heating season nephelometer light scattering coefficient (Bscat), normalized for temperature and meteorological effects for two sites in the Portland areas and one site in Seattle. For long-term projections of wood fuel use, a state-of-the-art model was adapted and applied to simulate wood fuel use during 1970-2000. This model calibrated well against limited available data on actual wood use. The model projects increasing or decreasing wood fuel use based primarily upon the magnitude of potential fuel cost savings from heating with wood versus other fuels.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170620
Residential Wood Combustion Study. Task 4. Technical Analysis of Wood Stoves: Combustion Principles, Design Considerations, Operating Techniques
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Mar 83, 75p, EPA-910/9-82-089F, PC A04/MF A01

Abstract: Design and operation of residential wood combustion devices influence both performance and emissions. Important design considerations include mechanisms to increase thermal efficiency and improve combustion efficiency. Operator-controlled variables such as fuel, charging rate, and combustion air regulation greatly impact performance and emissions. An overview of general information on fireplaces and woodstove design and operation, based on a literature review, is provided in this report. Basic combustion principles, efficiencies and combustion variables are discussed. The influence of design configurations on combustion with the resultant formation of pollutants is investigated. Modification of the combustion system and the heat transfer mechanism by design or retrofit is explored. The impact of fuel species, fuel moisture content and operational variables are discussed. Techniques for proper stove selection, particularly sizing of the stove for needed heat output, are described. Design parameters and firing techniques recommended to operate a stove or fireplace with minimum emissions are discussed. A bibliography of relevant technical reports is provided.

CL-IAP	INDOOR AIR POLLUTANTS
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170638
Residential Wood Combustion Study. Task 5. Emissions Testing of Wood Stoves, Volumes 1 and 2
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Nov 82, 304p, EPA-910/9-82-089G, PC A14/MF A01

Abstract: This report presents the results of 19 emission tests on four wood stoves and two retrofit emission control devices, conducted during June-October 1981. The objectives of this study were to further identify the effect of wood moisture on stove emissions, to evaluate several inexpensive (simplified) test procedures for assessing particulate emissions, and to define a level of particulate emissions which can be expected from state-of-the-art improved combustion stoves. This study included evaluating previous test data reported in the literature. A single standard operating procedure was used throughout the test program, the objective of which was to maintain a constant heat output rate. A heat output rate corresponding to a relatively moderate to low burn rate (less than 2.5 kg wood/hour) was chosen. A single wood type (Douglas fir) was used throughout the study; wood size was maintained at a consistent level. Throughout the entire test program measurements were made for particulates, carbon monoxide, carbon dioxide, oxygen, and hydrocarbon content of the emissions; the gaseous constituents were monitored continuously. Measurements were made for creosote deposition, opacity, and smoke spot density. Appendixes for this report are contained in Report No. PB84-170646.

CL-PM	PARTICULATE MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS/AM	SOURCE SAMP/AMB MON
124-38-9	CARBON DIOXIDE
630-08-0	CARBON MONOXIDE

PB84-170646
Residential Wood Combustion Study. Task 5. Emissions Testing of Wood Stoves. Volumes 3 and 4 (Appendices)
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Nov 82, 353p, EPA-910/9-82-089H, PC A16/MF A01

Abstract: This report contains the appendices for the results of 19 emission tests on four wood stoves and two retrofit emission control devices (reported in PB84-170638). The objectives of the study were to further identify the effect of wood moisture on stove emissions, to evaluate several inexpensive (simplified) test procedures for assessing particulate emissions, and to define a level of particulate emissions which can be expected from state-of-the-art improved combustion stoves. This study included evaluating previous test data reported in the literature. A single standard operating procedure was used throughout the test program, the objective of which was to maintain a constant heat output rate, as monitored by combustion chamber temperature and stove surface temperature. A heat output rate corresponding to a relatively moderate to low burn rate (less than 2.5 kg wood/hour) was chosen. A single wood type (Douglas fir) was used throughout the study; wood size was maintained at a consistent level. Throughout the entire test program measurements were made for particulate, carbon monoxide, carbon dioxide, oxygen, and hydrocarbon content of the emissions; the gaseous constituents were monitored continuously. Measurements were made for creosote deposition, opacity, and smoke spot density.

CL-PM PARTICULATE MATTER
CL-WOOD WOOD SMOKE
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT
TM TECHNICAL MONITORING

PB84-170653
Residential Wood Combustion Study. Task 7. Indoor Air Quality
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, J.A. Cooper, J.E. Houck
Oct 82, 159p, EPA-910/9-82-089J, PC A08/MF A01

Abstract: Indoor exposure to particulate air pollution associated with residential wood combustion was studied in five typical Northwest homes during May, 1980. Particulate mass and polynuclear aromatic hydrocarbon (PNA) species were measured in each home prior to, and during wood appliance use to determine the degree to which indoor particulate mass and PNA concentrations increased. Air infiltration rate information typical of the homes included in the survey were obtained from the literature. Records of wood use and climatic conditions during the indoor sampling period were maintained. Experimental results are compared to other indoor air pollution studies on residential wood combustion and interpreted in relation to typical wood use during cold weather periods associated with greater wood burning activity. Program conclusions relative to appliance operations, design and maintenance are discussed.

CL-IAP INDOOR AIR POLLUTANTS
CL-PM PARTICULATE MATTER
CL-POM POLYCYCLIC ORGANIC MATTER
CL-WOOD WOOD SMOKE
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB84-171545
Study of the Effectiveness of a Catalytic Combustion Device on a Wood Burning Appliance
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J.M. Allen, W.H. Piispanen, M. Cooke
Mar 84, 47p, EPA-600/7-84-046, PC A03/MF A01

Abstract: The report gives results of operating a wood stove, incorporating a catalytic combustor, while burning air-dried oak at low burning rates. Gas composition was measured continuously both at the entrance of the catalyst (after the gases had left the burning wood) and at the exit of the stove (after the gases had traversed the catalyst). These continuous monitors showed a reduction of about 3:1 in volatile hydrocarbons measured by a flame ionization detector, and a comparable reduction in carbon monoxide. These monitors showed no significant corresponding reduction when the active catalyst was replaced with an identical ceramic element, but without the noble metal coating. Grab samples collected from the flue gas early during the wood burning cycle, analyzed by direct gas-phase MS and GC, confirmed the lower concentrations of volatile combustible species when the active catalyst was used. Integrated samples of flue gas collected throughout the test burn were analyzed for less volatile organic species and PAH species. These analyses indicated that the catalyst was less effective in reducing these species, including particulate collected on a hot filter and high molecular weight species such as BaP.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-172105
Literature Review on Occurrence and Methodology for Determination of Nickel, Chromium, Manganese, and Arsenic Species in Air
EPA, Research Triangle Park, EMSL
Battelle Columbus Labs
R. M. Riggin, E. J. Mezes, W. M. Henry
Mar 84, 56p, EPA-600/4-84-026, PC A04/MF A01

Abstract: A critical literature review of the state of the art for speciation of arsenic, chromium, manganese, and nickel in atmospheric samples was performed. Techniques for distinguishing the compound forms and valence states of these metals were critically assessed. Three basic types of speciation procedures were identified: (a) direct analysis of particulate matter, (b) speciation of inorganic compounds after dissolution, and (c) sequential or selective extraction. Direct analysis techniques offer the possibility of determining specific compounds but are limited in sensitivity. The latter two techniques cannot determine specific inorganic compounds because of the inclusion of a dissolution step. However, such techniques may give useful information and are more generally applicable than direct analysis techniques. In a few cases (e.g., arsine), compounds may exist in the gas phase and can therefore be readily distinguished from other compound forms of the element.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
7439-96-5	MANGANESE
7440-02-0	NICKEL
7440-38-2	ARSENIC
7440-47-3	CHROMIUM

PB84-172493
Assessment of Atmospheric Emissions from Quenching of Blast Furnace Slag with Blast Furnace Blowdown Water
EPA, Research Triangle Park, NC, IERL
PEDCo-Environmental, Inc.
G. Annamraju, W. Kemner, P.J. Schworer
Mar 84, 87p, EPA-600/2-84-072, PC A05/MF A01

Abstract: The report gives results of 15 emission measurements made on a laboratory scale facility simulating typical plant slag quenching practice. The measurements were made to determine if a potential alternative to treatment prior to discharge of blast furnace blowdown water (using it, untreated, to quench blast furnace slag) will significantly increase emissions to the atmosphere. Test parameters included two slag temperatures (593 C and 816 C) and two waters, relatively clean mill service water (total dissolved solids, TDS, = 450 mg/l) and blast furnace blowdown water (TDS = 2500 mg/l). Particulate emissions increased with increasing TDS in the quench water. For the same water, emissions were higher at the higher slag temperature; this trend was more pronounced with the dirtier water. Some organic species were found in the emissions, but there was little correlation with water quality or slag temperature.

CL-ORGANIC	ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB84-175744
Review of New Source Performance Standards for Grain Elevators
EPA, Research Triangle Park, NC, OAQPS
Jan 84, 105p, EPA-450/3-84-001, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
01	AGRICULTURAL PRODUCTION-CROPS
35	MACHINERY, EXCEPT ELECTRICAL
352	FARM AND GARDEN MACHINERY
3523	FARM MACHINERY AND EQUIPMENT

PB84-176874
Benzene Emissions from Ethylbenzene/Styrene Plants - Background Information for Proposal to Withdraw Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 56p, EPA-450/3-84-003, PC A04/MF A01

Abstract: This document contains information that formed the basis for the decision to withdraw standards for the ethylbenzene/styrene industry proposed December 18, 1980 (45 FR 83448). The report includes a summary of industry changes since proposal, a summary of public comments relevant to the withdrawal decision, and the rationale for the decision to withdraw proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB84-177765
Laboratory Evaluation of Tunable Atomic Line Molecular Spectrometers for Benzene Analysis
EPA, Research Triangle Park, NC, EMSL
D.R. Scott, R.L. Hedgecoke
Apr 84, 43p, EPA-600/4-84-030, PC A03/MF A01

Abstract: Tunable Atomic Line Molecular Spectroscopy (TALMS) is a high resolution, differential absorption technique used in the ultraviolet region. Under Interagency Agreements EPA-80-D-X1014 and AD-89-F-2A008 with Lawrence Berkeley Laboratory, two prototype TALMS instruments were designed, constructed, and delivered to the U.S. EPA at Research Triangle Park, North Carolina. TALMS I (a large laboratory instrument designed to demonstrate the feasibility of TALMS detection of toxic organic compounds), and TALMS II (a more compact monitor for benzene designed for possible field applications) were evaluated in the laboratory for performance characteristics in the analysis of benzene using the 253.7 nm mercury line. The tests included detection limit, precision, effect of temperature (TALMS I), effect of pressure (TALMS II), and interferences from organic compounds other than benzene. They can detect benzene precisely above the detection limit of 6 microgram. The apparent interferences from toluene and pyridine are relatively small and may be artifacts which can be eliminated with improvement in electronic signal processing. It was recommended that changes to the sample cell and electronics be made to improve the detection limit and that extension of the capabilities of TALMS to other organic compounds be made.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
71-43-2	BENZENE

PB84-179878
Characterization of Emissions from a Fluidized-Bed Wood Chip Home Heating Furnace
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
R.S. Truesdale
Mar 84, 74p, EPA-600/7-84-038, PC A04/MF A01

Abstract: The report gives results of measurements of emissions from a residential wood-chip combustor, operated in both a fluidized-bed and cyclone-fired mode, and their comparison with those from a conventional woodstove and industrial wood-fired boilers. In general, the combustion efficiency of the fluidized-bed and cyclone-fired wood-chip burner is higher than that of conventional woodstoves. Concomitant with this increase in efficiency is a decrease in most emissions. For the fluidized-bed tests, significant reductions of total hydrocarbons and CO were observed, compared to woodstove emissions. The cyclone test showed PAH levels far below those of conventional woodstoves, approaching levels measured in industrial wood-fired boilers. A baghouse, installed during two fluidized-bed tests, was extremely effective in reducing both particulate and PAH emissions. Method 5 samples from above the fluid bed suggest that appreciable PAH is formed in the upper region of the furnace or in the watertube heat exchangers. In general, the cyclone-fired mode was more effective in reducing emissions from residential wood combustion than the fluidized-bed mode.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
630-08-0	CARBON MONOXIDE

PB84-179951
Review of New Source Performance Standards for Primary Copper Smelters:
Chapters 1 through 9
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 586p, EPA-450/3-83-018A, PC A25/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER

PB84-179969
Review of New Source Performance Standards for Primary Copper Smelters:
Appendices
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 153p, EPA-450/3-83-018B, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER

PB84-181825
Final Environmental Impact Statement Synthetic Fiber Production Facilities: Background Information Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 66p, EPA-450/3-82-011B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
22	TEXTILE MILL PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS

PB84-181882
Analysis of Polynuclear Aromatic Hydrocarbons in Particulate Matter by Luminescence Techniques
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
W. A. Ivancic, et al.
Apr 84, 55p, EPA-600/4-84-003, PC A04/MF A01

Abstract: Fluorescence, phosphorescence, and heavy-metal activated room temperature phosphorescence spectra were obtained for ten polycyclic aromatic hydrocarbon (PAH) reference compounds individually and in mixtures on quartz plates and particulate matter. The results indicate that multi-component analysis of PAHs on airborne particulate matter may be possible with the development of appropriate multicomponent spectral deconvolution procedures. The direct analysis approach in combination with the use of solvent extraction followed by fluorescence analysis can provide a rapid means of analysis for PAHs both within and on the surface of particulate matter. Direct phosphorescence was too weak to be useful at 5-10 micrograms/g levels found in many types of particulate samples. Heavy-metal activated room-temperature phosphorescence appears more sensitive to matrix and substrate effects and less amenable to multi-component analysis than fluorescence. The fluorescence spectrum of benzo(a)pyrene was found to be affected by exposure to low levels of ozone. However, the fluorescence spectrum retains characteristic features that enable identification of the benzo(a)pyrene.

CL-PNA	POLYNUCLEAR AROMATICS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-182369
Approaches to Risk Assessment for Multiple Chemical Exposures
EPA, Cincinnati, OH, ECAO
J.F. Stara, L.S. Erdreich
Mar 84, 288p, EPA-600/9-84-008, PC A13/MF A01

Abstract: The Environmental Criteria and Assessment Office (ECAO) in Cincinnati has developed health risk assessment methods for chronic exposure to a single chemical from a single route of exposure. Risk assessments for carcinogens associated an exposure level with a particular incidence of cancer, using a non-threshold model which is linear at low doses. For systemic toxicants, the no-observed-adverse-effect level (NOAEL)/Uncertainty Factor approach was used to estimate an acceptable daily intake (ADI). In order to develop methods for assessing risk from exposure to mixtures of chemicals, all relevant routes and all exposure durations must be considered. The basis of the single chemical approach is constantly updated to keep pace with developments in pharmacokinetics, species and route extrapolation, mathematical models, additivity and interaction. These and other relevant issues were addressed during a 2-day workshop on 'Approaches to Risk Assessment for Multiple Chemical Exposures' held by the U.S. Environmental Protection Agency in Cincinnati, Ohio on September 29 and 30, 1982. The workshop was attended by 50 scientists from EPA and private industry. This document presents the results of this workshop, including presentations, critiques and discussion for each of the 11 subtopics covered.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RA	RISK ASSESSMENT

PB84-183565
Health Assessment Document for 1,1,1-Trichloroethane (Methyl Chloroform)
EPA, Research Triangle Park, NC, ECAO
R. Carchman, et al.
Feb 84, 181p, EPA-600/8-82-003F, PC A09/MF A01

Abstract: Methyl chloroform (MC) is a volatile chlorinated hydrocarbon used extensively as an industrial solvent and in consumer products. It has been detected in the ambient air of a variety of urban and non-urban areas of the United States. In certain instances involving contamination of groundwater, much higher levels have been reported. The weight of available evidence obtained from human and animal data suggest that long-term exposure to environmental levels of MC poses no serious health concern to the general population. No tetratogenic potential has been demonstrated for MC in studies conducted to date in rodent species. Available data are inadequate for reaching firm conclusions about its mutagenic potential in humans. Because of the limited usefulness of the animal bioassays conducted to date, it is not possible to classify MC in regard to its carcinogenic potential in humans.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
71-55-6	TRICHLOROETHANE,1,1,1-

PB84-183649
Immunotoxicity of Air Pollutants
EPA, Research Triangle Park, NC, HERL
J.A. Graham, D.E. Gardner
1984, 48p, EPA-600/D-84-096, PC A03/MF A01

Abstract: The most common ubiquitous air pollutants, as well as some point source (e.g. metals) air pollutants, decrease the function of pulmonary host defense mechanisms against infection. Most of this knowledge is based on animal studies and involves cellular antibacterial defenses such as alveolar macrophages and mucociliary clearance. Information on viral infectivity is more sparse. Since there is no routine treatment for viral infections which have a relatively high rate of occurrence, this gap in knowledge is of concern. Given the major gaps in knowledge, a reasonably accurate assessment of the immunotoxicity of air pollutants is not possible. When the limited data base is reviewed relative to ambient levels of the common pollutants, it appears that acute exposures to O3 and H2SO4 and chronic exposures to NO2 are the major exposures of concern for immunotoxic effects. It is critical to point out, however, that until information is available for chronic exposures to low levels of metals and for exposures to common organic vapors, the immunotoxicity of air pollutants cannot be assessed adequately.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
10028-15-6	OZONE
10102-44-0	NITROGEN DIOXIDE
7446-09-5	SULFUR DIOXIDE
7664-93-9	SULFURIC ACID

PB84-184704
Determination of a Range of Concern for Mobile Source Emissions of Formaldehyde Based Only on Its Toxicological Properties
EPA, Ann Arbor, MI, OMS
P.M. Carey
Jul 83, 63p, EPA-AA-TSS-83-5, PC A04/MF A01

Abstract: This report describes an effort by the Emission Control Technology Division of the Environmental Protection Agency (EPA) to suggest a range of concern for formaldehyde (HCHO) emissions from mobile sources. In accordance with section 202 (a) (4) of the Clean Air Act (CAA) and due to a concern within industry as to what emission levels will be used as the basis for the evaluation of current and future technologies, a methodology was developed in order to bracket a range of concern for various unregulated pollutants. This report coordinates the efforts from two EPA contracts in order to use this methodology specifically for an evaluation of formaldehyde. Mathematical models were previously designed for various exposure scenarios (such as enclosed spaces, expressways, and street canyons). These models were used to calculate the ambient air concentrations resulting from various mobile source formaldehyde emission factors. In conjunction with this, a formaldehyde health effects literature search was conducted to aid in the determination of the suggested range of concern. The results of the analysis suggest a range of concern for ambient formaldehyde concentrations.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
413	INTERCITY HIGHWAY TRANSPORTATION
50-00-0	FORMALDEHYDE

PB84-184902
Laboratory-Scale Flame-Mode Hazardous Waste Thermal Destruction Research
EPA, Cincinnati, OH, IERL
Energy and Environmental Research Corp.
J.C. Kramlich, et al.
Apr 84, 155p, EPA-600/2-84-086, PC A08/MF A01

Abstract: This research is to investigate the flame-mode incinerability of hazardous waste compounds. It was also designed to provide a comparison between flame and non-flame destruction of compounds and act as a guideline for future work on the development of an acceptable incinerability ranking methodology. Two flame reactors were used in order to simulate a wide variety of failure conditions for liquid injection incinerators. The first reactor was called a microspray and consisted of droplets injected into a hydrocarbon flat-flame. The second reactor was a turbulent flame reactor which allowed the investigation of failure conditions in spray flames such as mixing, atomization and quench phenomena. The compounds investigated included: chloroform, 1,2-dichloroethane, benzene, chlorobenzene, and acrylonitrile.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-06-2	ETHYLENE DICHLORIDE
107-13-1	ACRYLONITRILE
108-90-7	MONOCHLOROBENZENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
67-66-3	CHLOROFORM
71-43-2	BENZENE

PB84-187806
Feasibility Study for Adapting Present Combustion Source Continuous Monitoring Systems to Hazardous Waste Incinerators. Volume 2: Review and Estimation of Incineration Test Conditions
EPA, Research Triangle Park, NC, IERL
GCA Corp.
R. McInnes, et al.
Mar 84, 78p, EPA-600/8-84-011B, PC A05/MF A01

Abstract: This report gives results of an adaptability study of commercially available sample conditioning and measurement systems, in the form of a guidelines document to be used by EPA and industry personnel. As part of EPA-sponsored research programs to investigate sampling and analysis methods for hazardous waste incineration (focused on adapting existing methods for identifying and quantifying constituents listed in 40 CFR 261), the adaptability of existing continuous emission monitoring systems (CEMS) involves such measurement categories as SO2, SO3, NOx, CO, CO2, O2, HCl, and organic materials. Study results indicate that commercially available extractive continuous monitors can be adapted to incinerators through proper sample conditioning. Available CEMS provide the ranges and sensitivities needed to accurately measure concentrations of the organic and inorganic components of interest.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-187814
Feasibility Study for Adapting Present Combustion Source Continuous Monitoring Systems to Hazardous Waste Incinerators. Volume 1: Adaptability Study and Guidelines Document
EPA, Research Triangle Park, NC, IERL
GCA Corp.
J. Podlenski, et al.
Mar 84, 88p, EPA-600/8-84-011A, PC A05/MF A01

Abstract: The report gives results of an adaptability study of commercially available sample conditioning and measurement systems, in the form of a guidelines document to be used by EPA and industry personnel. As part of EPA-sponsored research programs to investigate sampling and analysis methods for hazardous waste incineration (focused on adapting existing methods for identifying and quantifying constituents listed in 40 CFR 261), the adaptability of existing continuous emission monitoring systems (CEMS) involves such measurement categories as SO2, SO3, NOx, CO, CO2, O2, HCl, and organic materials. Study results indicate that commercially available extractive continuous monitors can be adapted to incinerators through proper sample conditioning. Available CEMS provide the ranges and sensitivities needed to accurately measure concentrations of the organic and inorganic components of interest.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-189646
Method for Collection and Analysis of Chlorobenzenes
EPA, Research Triangle Park, NC, ESRL
Monsanto Research Corp.
G.W. Wooten, et al.
May 84, 48p, EPA-600/3-84-058, PC A03/MF A01

Abstract: To measure ambient concentrations and individual exposure to potentially hazardous chlorinated organic compounds, analytical methodology using absorbent-based samplers (passive exposure devices) and gas chromatographic techniques were developed. The samplers selectively absorb and concentrate chlorinated organics and other organic compounds diffusing into the solid absorbent. Analysis is carried out by desorption of the trapped compounds by heating, separation by gas chromatography and detection using a Hall detector for the chlorinated organics. Sampling and analytical techniques were evaluated under laboratory conditions with low concentrations of gaseous compounds and optimized for detection and quantitation. The samplers and analytical techniques are capable of detecting subparts-per-billion concentrations of test compounds after one-half hour exposure.

CL-CAH	CHLORINATED ALIPHATIC HYDROCARBONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
108-90-7	MONOCHLOROBENZENE
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM

PB84-189851
Controlled Air Incineration of Pentachlorophenol-Treated Wood
EPA, Cincinnati, OH, IERL
Los Alamos National Lab
L.A. Stretz, J.S. Vavruska
May 84, 110p, EPA-600/2-84-089, PC A06/MF A01

Abstract: This research was initiated to determine the operating conditions necessary to effect complete thermal destruction (greater than 99.99%) of pentachlorophenol (PCP)-treated wood in a controlled air incinerator (CAI) and to provide a basis for evaluating the applicability of other incineration systems to the destruction of PCP-treated wood. The treated wood in question was scrap from used ammunition crates in Korea. It has been proposed that a substantial amount of such wood be disposed of by incineration in a unit located in that country. A major concern in such incineration is the potential formation of such toxic compounds as chlorinated dibenzo-p-dioxins and dibenzofurans. Test results showed a combustion efficiency of >99.99% for PCP in the primary chamber under test conditions with no detectable production of tetrachlorodibenzo-p-dioxin (TCDD) or tetrachlorodibenzofuran (TCDF) at detection limits in sample extracts of 1 and 5 ppb, respectively.

CL-DIOXIN	DIOXIN
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
24	LUMBER AND WOOD PRODUCTS
244	WOOD CONTAINERS
2441	NAILED WOOD BOXES AND SHOOK
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
87-86-5	PENTACHLOROPHENOL

PB84-190735
Evaluation of Sampling Methods for Gaseous Atmospheric Samples
EPA, Research Triangle Park, NC, ESRL
Research Triangle Institute
E.D. Pellizzari, et al.
May 84, 294p, EPA-600/3-84-062, PC A13/MF A01

Abstract: A research program was conducted to test and evaluate several alternatives for collecting and transferring samples from the collection site to the laboratory for the analysis of a variety of toxic organic pollutants by gas chromatography (GC). Sample storage media included three types of polymeric bags (FEP Teflon, Tedlar, five-layered aluminized bags), glass bulbs, electropolished and Summa polished cannisters, Tenax GC and charcoal cartridges, and nickel cryogenic traps. Twenty-seven test compounds including hydrocarbons, aromatics, halogenated hydrocarbons, halogenated aromatics, and oxygen, nitrogen and sulfur-containing compounds were used to test the storage media. Dynamically flowing mixtures of these gases were synthesized using a specially designed permeation/dilution system. Quantitative stability tests were conducted with the remaining storage media at one concentration level, nominally 50 ppb, for the same 15 chemicals. The stability tests were conducted over a 7 day storage period. The potential effect of inorganic gases as interferences during the collection of test compounds was quantitatively studied.

CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB84-190891
Health Assessment Document for Inorganic Arsenic
EPA, Research Triangle Park, NC, ECAO
D. Jacobson-Kram, et al.
Mar 84, 350p, EPA-600/8-83-021F, PC A15/MF A01

Abstract: Inorganic arsenic, predominantly the tri- and pentavalent forms, is emitted to the environment primarily through smelting activity, biocide use and glass manufacturing. Monitoring data indicate a concentration of equal to or less than 0.1 microgram/cu m for most locations. Major routes of absorption of inorganic arsenic in the general population are inhalation and ingestion. Inhaled inorganic arsenic deposited in the lungs is eventually absorbed. Most ingested soluble inorganic arsenic is absorbed; insoluble forms pass through the gastrointestinal tract with negligible absorption. Inorganic arsenic metabolism in man is complicated by biotransformation processes which include the methylation and oxidation-reduction interconversion of inorganic arsenic. Long-term accumulation of inorganic arsenic does not generally occur in physiologically active compartments in the body; renal clearance appears to be the major route of excretion of absorbed inorganic arsenic. Acute symptoms of inorganic arsenic poisoning include severe gastrointestinal damage, facial edema, cardiovascular reactions, peripheral nervous system disturbances, and hematopoietic system effects. General population concerns arising from long-term exposures to moderate levels of inorganic arsenic include respiratory and skin cancer, neuro/cardiovascular effects.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
32 STONE, CLAY, AND GLASS PRODUCTS
321 FLAT GLASS
3211 FLAT GLASS
322 GLASS AND GLASSWARE, PRESSED OR BLOWN
3221 GLASS CONTAINERS
3229 PRESSED AND BLOWN GLASS, NEC
33 PRIMARY METAL INDUSTRIES
333 PRIMARY NONFERROUS METALS
3333 PRIMARY ZINC
334 SECONDARY NONFERROUS METALS
3341 SECONDARY NONFERROUS METALS
7440-38-2 ARSENIC

PB84-191543
Environmental Impact Statement for Lime Manufacturing Plants: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 49p, EPA-450/3-84-008, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB84-194604
Removal of Polynuclear Aromatic Hydrocarbons from Primary Aluminum Air Pollution Control Scrubber Wastewater
EPA, Cincinnati, OH, IERL
Rexnord, Inc.
C.R. Dempsey, K.A. Dostal, R.A. Osantowski
May 84, 20p, EPA-600/D-84-135, PC A02/MF A01

Abstract: A pilot-scale study was conducted at a primary aluminum plant to evaluate the removal of benzo(a)pyrene and other polynuclear aromatic hydrocarbons (PAH's) from potline scrubber wastewater. Specific objectives included determining the need for granular activated carbon to remove the PAH's to 10 micrograms/1 and evaluating the use of benzo(a)pyrene as an indicator for the removal of all PAH's.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
50-32-8	BENZO(A)PYRENE

PB84-195403
Temperature-Dependent Collection Efficiency of a Cryogenic Trap for Trace-Level Volatile Organic Compounds
EPA, Research Triangle Park, NC, EMSL
Northrop Services, Inc.
J.D. Pleil, W.A. McClenny
May 84, 19p, EPA-600/D-84-133, PC A02/MF A01

Abstract: Reduced temperature preconcentration of volatile organic compounds in a packed trap is examined experimentally as a function of trapping temperatures ranging from -180C to +100C. Trapped compounds are thermally desorbed into a capillary column-equipped gas chromatograph and quantified with a flame ionization detector. Data sets are presented for 21 compounds of environmental interest at various concentrations (in dry zero air) in the range of 0.1 ppbv to 100 ppbv. Measured chromatographic peak areas increase from a low but non-zero value for high trap-temperature runs to a constant value as the trap temperature is lowered. Extrapolated Clausius-Clapeyron equations are shown to be a useful guide in estimating the trap temperature required for 99% collection efficiency.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING

PB84-197144
Residential Wood Combustion Study, Task 6, Control Strategy Analysis
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
R.L. Gay, W.T. Green
Apr 83, 291p, EPA-910/9-82-089I, PC A13/MF A01

Abstract: This study developed and evaluated a comprehensive list of alternative strategies for controlling the ambient air quality impact of residential wood combustion (RWC) in the Pacific Northwest. Over seventy-five control strategy elements were initially evaluated, using a Keppner-Tregoe evaluation process, which included five minimum (MUST) criteria and twelve desirable (WANT) criteria. Twenty generic strategy approaches were evaluated, using available published information and extensive assumptions, to estimate their potential ability to reduce RWC particulate emissions. Based on the findings of these analyses, fifteen RWC control strategies were selected and evaluated using the Keppner-Tregoe process. Rough estimates of implementation costs were made. A matrix summary of the fifteen strategies was prepared showing their relative ranking based on all twelve WANT criteria, their estimated costs, and benefits in terms of estimated particulate emission reduction potential.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-198001
Current Intelligence Bulletin 40, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin')
National Institute of Occupational Safety and Health
Jan 84, 26p, PC A03/MF A01
NIOSH PUB No. 84-104, AVAIL NIOSH

Abstract: In animals, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin') causes various systemic effects at a wide range of exposure concentrations, including tumorigenesis, immunological dysfunction, and teratogenesis. Studies of humans exposed to TCDD-contaminated materials suggest that TCDD is the cause of observed chloracne, metabolic disorders (porphyria), and other systemic problems and are suggestive of TCDD's ability to cause cancer. TCDD occurs as a contaminant of materials such as 2,4,5-trichlorophenol (TCP), 2,4,5-trichlorophenoxyacetic acid (2,4,5-T), and 2-(2,4,5-trichlorophenoxy)propionic acid (silvex). Occupational exposure may occur through contact with these materials during use or from the past contamination of worksites. The National Institute for Occupational Safety and Health (NIOSH) recommends that TCDD be regarded as a potential occupational carcinogen, that occupational exposure to TCDD be controlled to the fullest extent feasible, and that decontamination measures be used for TCDD-contaminated work environments.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
93-72-1	SILVEX
93-76-5	TRICHLOROPHENOXYACETICACID,2,4,5-
95-95-4	TRICHLOROPHENOL,2,4,5-

PB84-198019
Current Intelligence Bulletin 41, 1,3-Butadiene CH2-CH-CH=CH2
National Institute of Occupational Safety and Health
Feb 84, 61p, PC A04/MF A01
NIOSH PUB No. 84-105, AVAIL NIOSH

Abstract: Inhalation exposure of rats and mice to 1,3-butadiene induced a carcinogenic response at multiple sites. Mammary fibroadenomas/carcinomas, uterine sarcomas, Leydig cell adenomas of the testes, thyroid follicular cell adenomas, exocrine tumors of the pancreas, and Zymbal gland carcinomas were identified in rats exposed at concentrations of 1,000 or 8,000 ppm of 1,3-butadiene. Mice exposed to 625 or 1,250 ppm of 1,3-butadiene developed a high incidence of malignant lymphomas; an increased incidence of other tumors, including hemangiosarcomas; and testicular and ovarian atrophy. The offspring of pregnant rats exposed to 1,3-butadiene at 8,000 ppm had major skeletal defects. In addition, fetal toxicity was observed when pregnant dams were exposed to 200 ppm, 1,000 ppm, and 8,000 ppm. Epidemiological studies of workers employed in facilities producing styrene-butadiene rubber indicated an increased, but not statistically significant, risk of mortality from neoplasms of the lymphatic and hematopoietic tissues and from leukemia.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
106-99-0	BUTADIENE,1,3-
30	RUBBER AND MISC. PLASTICS PRODUCTS

PB84-199033
Control of Wood Stove Emissions Using Improved Secondary Combustion
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J.M. Allen, W.H. Piispanen
May 84, 49p, EPA-600/7-84-061, PC A03/MF A01

Abstract: The report gives results of the operation of two wood stoves in the laboratory with simultaneous on-line chemical analysis of the gases entering the secondary combustion zone and those leaving the stove. (NOTE: Self-initiating secondary combustion in wood stoves is encouraged by designs that introduce additional heated air and turbulence to the primary combustion products. This can be very effective in reducing CO and hydrocarbon emissions at high burning rates. At low burning rates, the effectiveness is limited by low temperatures, inadequate mixing, and thermal quenching by the primary air which bypasses the wood.) Stove modifications providing increased temperatures and improved mixing in the secondary combustion zone in a small box stove resulted in minor improvements in secondary burning. The continued burning of CO in the secondary zone was not greatly affected. In a large side-draft stove, with effective secondary burning at high burning rates, the secondary burning at low rates was not effective at any air flow distribution available to the operator.

CL-WOOD WOOD SMOKE
CT CONTROL TECHNOLOGY
EPA ENVIRONMENTAL PROTECTION AGENCY
630-08-0 CARBON MONOXIDE

PB84-199371
Evaluation of the Efficiency of Industrial Flares: Test Results
EPA, Research Triangle Park, NC, IERL
Energy and Environmental Research Corp.
J.H. Pohl, R. Payne, J. Lee
May 84, 194p, EPA-600/2-84-095, PC A09/MF A01

Abstract: The report gives results of Phases 3 and 4 of a four-phase research program to quantify emissions from, and efficiencies of, industrial flares. Phase 1 consisted of the experimental design; Phase 2, the design of the test facilities; Phase 3, development of the test facilities; and Phase 4, data collection and analysis. The combustion efficiency of large pilot-scale flares was measured. The flame structure and combustion efficiencies were correlated with operating conditions of the flare, the size of the flare head, and properties of the flared gases. The combustion efficiency was correlated with the ratio of heating value of the gas flared to the heating value required to maintain a stable flame, and was independent of the flame head size. In turn, the heating value required to maintain a stable flame was correlated with the reciprocal of an estimated flame temperature based on properties of the flared gas. The length of the flame, entrainment into the flame, and liftoff distances were also correlated, using combinations of the Richardson Number, jet theory, and properties of the flared gas.

CT CONTROL TECHNOLOGY
EPA ENVIRONMENTAL PROTECTION AGENCY
TM TECHNICAL MONITORING
28 CHEMICALS AND ALLIED PRODUCTS
289 MISCELLANEOUS CHEMICAL PRODUCTS
2899 CHEMICAL PREPARATIONS, NEC

PB84-199785
Epidemiological Study of the Incidence of Cancer as Related to Industrial Emissions in Contra Costa County, California
EPA, Research Triangle Park, NC, HERL
California Department of Health Services, Emeryville
D.F. Austin, et al.
Jun 84, 79p, EPA-600/1-84-008, PC A05/MF A01

Abstract: The purpose of this study was to examine the relationship of lung cancer incidence in Contra Costa County to ambient levels of air pollution. It was suspected that the presence of heavy industry in the county could be a contributing factor. Air pollution patterns were determined by five permanent air monitoring stations and ten temporary stations which monitored the levels of 12 air pollutants for a period of one year. By correlating the 1970-79 lung cancer rates for each census tract and tract levels of air pollution constituents, a statistically significant relationship between ambient air SO4 and lung cancer in males, but not in females, was found. However, when adjusted for the percent of the working population categorized as blue collar, the association was eliminated. An interview study of 249 cases and 373 controls was then conducted. Demographic, work history, residential history, dietary, and smoking history questions comprised the bulk of the data collected. Analysis indicated that the major contribution to lung cancer in the county was due to cigarette smoking. No significant association between lung cancer risk and measured constituents of air pollution was found. Of five broad occupational categories, none had any significant relationship to lung cancer.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB84-199793
In situ Field Portable Fine Particle Measuring Device
EPA, Research Triangle Park, NC, IERL
Particle Measuring Systems, Inc.
R.G. Knollenberg
May 84, 228p, EPA-600/2-84-096, PC A11/MF A01

Abstract: The report describes the design, development, and testing of an in situ fine particle measuring device--the Fine Particle Stack Spectrometer System (FPSSS). It is a laser-fed optical system with detection by near-forward light scattering. Sample volume is established by a high-resolution optical system that views particle images in a dark field through a masked beam splitter. The FPSSS covers an 0.5 to 11.0 micrometer size range with 60-channel resolution. Absolute theoretical accuracy is + or -20% of size for completely unknown refractive index. The FPSSS is designed to operate continuously at in-stack temperatures up to 250C at flow velocities up to 30m/sec. It has been laboratory characterized and field tested on coal-fired power plants at both the inlets and outlets of control devices. Its performance indicates good agreement with impactors and excellent agreement with opacity meters in computed mass loading and optical opacity. Its size resolution is greater than other currently known techniques. Its eventual use will be directed at characterizing particulate emissions of stacks or other stationary sources and qualitatively evaluating the performance and collection efficiencies of particular control devices now in operation.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-200609
Locating and Estimating Air Emissions from Sources of Acrylonitrile
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Mar 84, 70p, EPA-450/4-84-007A, PC A04/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with acrylonitrile. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of acrylonitrile and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit acrylonitrile, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE

PB84-200617
Locating and Estimating Air Emissions from Sources of Chloroform
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 102p, EPA-450/4-84-007C, PC A06/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with chloroform. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of chloroform and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chloroform, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
67-66-3	CHLOROFORM

PB84-200625
Locating and Estimating Air Emissions from Sources of Carbon Tetrachloride
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 128p, EPA-450/4-84-007B, PC A07/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with carbon tetrachloride. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of chloroform and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chloroform, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
56-23-5	CARBON TETRACHLORIDE

PB84-200633
Locating and Estimating Air Emissions from Sources of Formaldehyde
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 128p, EPA-450/4-84-007E, PC A07/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with formaldehyde. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of formaldehyde and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chloroform, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
50-00-0	FORMALDEHYDE

PB84-200666
Correlation of Coal Properties with Environmental Control Technology Needs for Sulfur and Trace Elements
EPA, Research Triangle, NC, IERL
Radian Corp.
D.M. White, et al.
Jun 84, 358p, EPA-600/7-84-066, PC A16/MF A01

Abstract: The report reviews existing reports and data on the occurrence of sulfur and trace elements in U.S. coals and on the effect of coal properties on trace element partitioning during coal use. Emphasis was on: (1) the effect of depositional conditions on the formation and composition of mineral matter in coal, (2) the elemental concentration of major and trace elements in U.S. coals as a function of rank and geographic location, (3) analytical methods used for evaluating the modes of occurrence of these elements in coal, (4) conceptual models for predicting sulfur and trace element occurrence as a function of depositional conditions and chemical equilibrium, and (5) the fate of major and trace elements during coal cleaning, combustion, gasification, and waste disposal. Coal washability data for 44 U.S. coal samples were used to statistically estimate the trace element reduction potential for coal as a function of sulfur and ash reduction. Data fits were especially good for elements associated with the clay minerals, and to a lesser extent with the sulfides. Coal combustion data from 15 previous studies at commercial power plants were also analyzed; but, due to differences in technological processes at various plants, possible analytical errors, and limited data, statistical correlations are uncertain.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
7704-34-9	SULFUR

PB84-206523
Use of Portable Instrumentation for the Monitoring of Fugitive Organic Emissions from Hazardous Waste Incinerators
EPA, Research Triangle Park, NC, IERL
Little (Arthur D.), Inc.
C.H. Summers, A.C. Roche, K.E. Thrun
May 84, 57p, EPA-600/2-84-103, PC A04/MF A01

Abstract: The report gives results of evaluations and tests of currently available portable instrumentation used to monitor fugitive organic emissions generated by the transfer and storage of liquid wastes during the operation of hazardous waste incinerators. Relevant current methodologies were evaluated, and results and recommendations of the evaluations were tested. The evaluation of current methodologies for portable volatile organic compound (VOC) monitors, with regard to their applicability in monitoring fugitive organic emissions from hazardous waste incinerators, was completed and is documented as Appendix A of the report. The recommendation was to perform a limited field test with two photoionization analyzers (PIDs) at an operating liquid waste incinerator. A portable flame ionization detector (FID) (for which considerable prior data exists) was to be the reference. Most of the report discusses field tests of the evaluation results at the Cincinnati Municipal Sewer District's incinerator. Test data indicate that, for this application, either a PID containing a 10.2 eV light source or a FID is suitable.

CL-HAZWAST	HAZARDOUS WASTES
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
TM	TECHNICAL MONITORING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-207638
Impacts of Coal Combustion on Trace Elements in the Environment: Wisconsin Power Plant Impact Study
EPA, Duluth, MN, ERL
Wisconsin University-Madison
P.A. Helmke, et al.
Jun 84, 114p, EPA-600/3-84-070, PC A06/MF A01

Abstract: The impact of a modern coal-fired generating station on the environment, with emphasis on the concentrations and behavior of elements and the disposal of fly ash, was determined by analysis of aerosolic dust, oak leaves, aquatic organisms, water, fly ash, and coal. The major analytical techniques used were neutron activation analysis, x-ray fluorescence analysis, atomic absorption spectrophotometry, electron microscopy, and x-ray diffraction. Calcium, Ba, B, and Th concentrations were relatively high in the fly ash produced. When mixed with water, the fly ash reacts to form a cement-like material that includes pozzolanic mineral phases that were identified by x-ray diffraction and electron microscopy. Aerosolic dust collected in fallout buckets was enrined with Br, Hg, Sb, Se, Th, U, and Zn. Of the organisms tested, Asellus racovitzai and Odanata were most suitable for monitoring ecosystem trace element fluxes. Barium, Cr, Sc, and possibly Sb concentrations were higher in specimens of these organisms exposed to the ash effluent than in control specimens. These increases cannot be attributed to seasonal variability, sample contamination or differences in specimen size and are therefore thought to result from exposure of the organisms to ash effluent.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES

PB84-209477
Benzene Emissions from Coke By-Product Recovery Plants - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
May 84, 356p, EPA-450/3-83-016A, PC A16/MF A01

Abstract: National emission standards to control emissions of benzene from new and existing coke by-product recovery plants are being proposed under Section 112 of the Clean Air Act. This document contains information on the background and authority, regulatory alternatives considered, and environmental and economic impacts of the regulatory alternatives.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
71-43-2	BENZENE

PB84-210046
Passive Sampling Device for Ambient Air and Personal Monitoring
EPA, Research Triangle Park, NC, EMSL
Monsanto Co.
G. W. Wooten, et al.
Jun 84, 72p, EPA-600/4-84-050, PC A04/MF A01

Abstract: A high performance passive dosimeter has been developed and evaluated as a monitor for volatile organics in ambient air and for short-term, low-level personal monitoring applications. The dosimeter design was dictated by three major areas of concern: (1) diffusive mass transport considerations; (2) sorbent selection, and (3) chemical quantitation of the collected compounds, which intimately involves desorption procedures of the passive device.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-210301
Benzene Fugitive Emissions - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC OAQPS
Jun 82, 234p, EPA-450/3-80-032B, PC A11/MF A01

Abstract: A national emission standard for the control of fugitive emissions of benzene from the petroleum refining and organic chemical manufacturing industries is being promulgated under Section 112 of the Clean Air Act (42 U.S.C. 7412, as amended). This standard will limit fugitive emissions of benzene from existing and new equipment in benzene service. This document summarizes the responses to public comments received on the proposed standards and also summarizes the basis for changes made in the standards since proposal.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB84-210988
Locating and Estimating Air Emissions from Sources of Nickel
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Mar 84, 188p, EPA-450/4-84-007F, PC A09/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with nickel. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of nickel and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit nickel, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for nickel release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
7440-02-0	NICKEL

PB84-212224
Waste Crankcase Oil Heater Study: Phase 2. Organic and Inorganic Speciation Analyses
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
M. Cooke, et al.
Jul 84, 66p, EPA-600/7-84-072, PC A04/MF A01

Abstract: The report gives results of measurements of specific chemical species in emissions from two waste-oil-fired commercial heaters. The species were identified earlier in a Level 1 analysis of similar emissions. One heater utilized a vaporizing pot, and the other, an air atomization combustion chamber. Polynuclear aromatic hydrocarbons (PAHs) were analyzed in gaseous emissions from both units. Elemental analyses (including Pb, Fe, Cd, Zn, Cl, and Br) were performed on the air atomization discharges. Analyses also were conducted on these emissions to measure possible organolead constituents and to determine the distribution of iron oxidation states (Fe(II) versus Fe(III)). Also, several waste crankcase oils were tested for the elemental species of interest to set baseline levels for emission data and to determine the effect on metal concentrations of both filtration and sedimentation during storage. Elevated levels of PAHs were found in emissions from both heaters. Elevated levels of metallic species also were found, and Fe(III) was determined to be the major form of iron in combustion emissions from the waste-oil-fired air atomization heater. Since combinations of certain PAHs and Fe(III) have been shown to promote certain types of mammalian cancers, these results indicate a potentially serious health hazard.

CL-FUELOIL	FUEL OIL, WASTE DERIVED FROM
CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-37-2	IRON OXIDE
15438-31-0	IRON
7439-92-1	LEAD POWDER
7440-43-9	CADMIUM
7440-66-6	ZINC
7726-95-6	BROMINE
7782-50-5	CHLORINE

PB84-213958
Chemical Activities Status Report, Fourth Edition, Volume 1 (Toxics Integration Information Series)
EPA, Washington, DC, OPTS
E.T. Merrick, P. Grim
Feb 84, 440p, EPA-560/TIIS-84-001A, PC A19/MF A01

Abstract: The EPA Chemical Activity Status Report (EPACASR) is a guide to Agency activities relating to chemical substances. The report is organized into three sections: (1) Alphabetized Chemical Name Reference Listing (an index of names used for chemicals included in the text), (2) Chemical Name Synonym List (showing all synonyms for chemicals in the text, and arranged by CAS Registry Number), and (3) EPA Chemical Activities Report (arranged sequentially by CAS Registry Number). Sections 1 and 2 are in Volume I, Section 3 is in Volume II.

CL-HAZWAST	HAZARDOUS WASTES
CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB84-213966
Chemical Activities Status Report, Fourth Edition, Volume 2 (Toxics Integration Information Series)
EPA, Washington, DC, OPTS
E.T. Merrick, P. Grim
Feb 84, 729p, EPA-560/TIIS-84-001B, PC A99/MF E04

Abstract: The EPA Chemical Activity Status Report (EPACASR) is a guide to Agency activities relating to chemical substances. The report is organized into three sections: (1) Alphabetized Chemical Name Reference Listing (an index of names used for chemicals included in the text), (2) Chemical Name Synonym List (showing all synonyms for chemicals in the text, and arranged by CAS Registry Number), and (3) EPA Chemical Activities Report (arranged sequentially by CAS Registry Number). Sections 1 and 2 are in Volume I, Section 3 is in Volume II.

CL-HAZWAST	HAZARDOUS WASTES
CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB84-214006
Distillation Operations in Synthetic Organic Chemical Manufacturing - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 83, 395p, EPA-450/3-83-005A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS

PB84-215730
Paper Production and Processing - Occupational Exposure and Environmental Release Study
EPA, Cincinnati, OH, IERL
S-Cubed
R. Soklow
Jul 84, 656p, EPA-600/2-84-120, PC A99/MF A01

Abstract: This report presents an analysis of chemicals and processes used during the production and processing of paper and paper goods with emphasis on the workplace exposure and environmental release of chemicals from these operations. Reviews of chemical substances in this report are intended for use in developing realistic exposure and release scenarios associated with the review of new chemical substances used in the industry. In this report, a description of the industry is presented along with profiles of the various process subcategories occurring in the industry. Literature search and discussions with knowledgable persons in the industry during the development of this report have been aimed at developing process descriptions that address occupational exposures to workers, as well as information on the concentration of the release of chemicals to the environment. Process characteristics for each study area, including raw materials and chemicals used are presented along with the description of chemicals in wastestreams and other effluent characteristics. Discussion of waste control and treatment technologies used throughout the industry are also presented. The sources, effects and control of worker exposure to chemicals are described on an industry-wide basis.

CL-IAP	INDOOR AIR POLLUTANTS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
26	PAPER AND ALLIED PRODUCTS
262	PAPER MILLS, EXCEPT BUILDING PAPER
2621	PAPER MILLS, EXCEPT BUILDING PAPER

PB84-219666/REB
Flexible Vinyl and Urethane Coating and Printing - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Jun 84, 78p, EPA-450/3-81-016B, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written which contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. Also, it contains the final environmental impact statement, which summarizes the standard's impact. Finally, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
285	PAINTS AND ALLIED PRODUCTS
2851	PAINTS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2893	PRINTING INK
73	BUSINESS SERVICES
733	MAILING, REPRODUCTION, STENOGRAPHIC

PB84-220268
Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins. Parts
1 and 2, External Review Draft
EPA, Cincinnati, OH, ECAO
May 84, 592p, EPA-600/8-84-014A, PC A25/MF A01

Abstract: Dioxins are a class of compounds that contain the dibenzo-p-dioxin nucleus. In the chlorinated dioxins, the dibenzo-p-dioxin nucleus is substituted with chlorine at different positions of the fused benzene rings. Depending on the number and position of chlorine substitution, 75 congeners are possible for the chlorinated dioxins. This document deals with the most toxic chlorinated dioxins, namely, 2,3,7,8-tetra- chloro-, 1,2,3,7,8-penta-chloro-, 1,2,3,6,7,8-hexachloro-, and 1,2,3,-7,8,9-hexachlorodibenzo-p-dioxin. Of these four congeners, the 2,3,7,- 8-tetrachlorodibenzo-p-dioxin has been studied extensively. This compound is often described in both popular and technical literature as 'TCDD' or simply 'dioxin'. A few documents exist at the present time that deal with selected aspects of polychlorinated dibenzo-p-dioxins in the environmental media. This document has been prepared to provide a comprehensive multi-media assessment of the analytical methodologies, environmental levels and ecological and health effects of the four chlorinated dioxins mentioned above.

CL-DIOXIN	DIOXIN
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB84-224401
Candidate Sampling and Analysis Methods for 21 Suspect Carcinogens in Combustion Emissions
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
M. Cooke, et al.
Jul 84, 187p, EPA-600/7-84-078, PC A09/MF A01

Abstract: The report identifies candidate sampling and analysis methods for 21 suspect carcinogens in conventional coal and fuel oil combustion emissions. The methods were selected from an extensive review of existing techniques used to determine the substances in air and other matrices. In addition to identifying specific methods for each suspect carcinogen, the report describes a comprehensive sampling and analysis protocol which can be used to determine 13 of the suspect carcinogens. Costs for the separate candidate methods and for the comprehensive protocol are also provided.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB84-224518/REB
Mobile Source Exposure Estimation
EPA, Ann Arbor, MI, OMS
Southwest Research Institute
M.N. Ingalls
Mar 84, 136p, EPA-460/3-84-004, PC A07/MF A01

Abstract: This project was conducted to provide a national exposure, in terms of person hours, to non-reactive mobile source pollutants. The basis for the estimate was the EPA 'NAAQS Exposure Model' (NEM) as applied to carbon monoxide, supplemented by four mobile source microenvironments: parking garages, street canyons, on-expressways, and roadway tunnels. From previous studies, both published and unpublished, CO concentration distributions and national population estimates, by hour of the day, for each of these mobile source microenvironments were developed. That information was combined to determine national exposure in the microenvironments. By using the mobile source CO emission factor, exposure to mobile source pollutants based on a pollutant emission rate of one gram per minute was determined for each of the microenvironments and the environments covered by the NEM. The methodology for using this information to determine exposure to any mobile source pollutant, regulated or unregulated, was explained.

CL-DIESEL	DIESEL
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
630-08-0	CARBON MONOXIDE
75	AUTO REPAIR, SERVICES, AND GARAGES
752	AUTOMOBILE PARKING
7525	PARKING STRUCTURES

PB84-226935/REB
Evaluation of Hazardous Waste Incineration in Cement Kilns at San Juan Cement Company
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J.A. Peters, et al.
Aug 84, 235p, EPA-600/2-84-129, PC A11/MF A01

Abstract: Cement kiln incineration of chlorinated liquid organic wastes was investigated in a 5-month demonstration program at San Juan Cement Company in Puerto Rico. Chlorinated monocarbon compounds (POHC's) were monitored in the waste and emissions, and the fate of added chlorine in cement production was determined. Seven levels of percent chlorine in the waste were burned at ten different waste feed rates. Extensive sampling and analysis was conducted to look for the potential presence of polychlorinated dibenzodioxins (PCDD's) and polychlorinated dibenzofurans (PCDF'S). The destruction and removal efficiencies (DRE) of the POHC's ranged from 91.043 percent to 99.997 percent, with only 6 percent of the DRE's greater than 99.99 percent. Poor DRE results were attributed to the absence of waste atomization and the difficult incinerability of chlorinated monocarbon compounds. It was found that about 82 percent of the input chlorine appeared in the cement clinker. The amount of chlorine appearing in the baghouse dust varied from 5 percent to 26 percent of total chlorine input. The total absorption of the HCl formed averaged 99.7 percent in seven tests. PCDD's and PCDF's were not produced at detectable levels when the cement plant was operating normally.

CL-CAH	CHLORINATED ALIPHATIC HYDROCARBONS
CL-DIOXIN	DIOXIN
CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-226976/REB
Use of Short-Term Genotoxic Bioassays in the Evaluation of Unregulated Automobile Emissions
EPA, Research Triangle Park, NC, HERL
Litton Bionetics, Inc.
D.J. Brusick, R.R. Young, D.R. Jagannath
Aug 83, 127p, EPA-600/1-84-011, PC A07/MF A01

Abstract: Exposure to fuels and fuel additives may occur through direct exposure to uncombusted fuel or fuel additives as well as to products of fuel/fuel-additive combustion. Presence of combustion products in ambient air is the major source of human exposure to motor vehicle fuels. The levels of several products of fuel combustion in ambient air (sulfur oxides, nitrogen oxides, fuel hydrocarbons and carbon monoxide) are currently regulated under the Clean Air Act Amendments (202(2)(4)) of 1977, which also specify that new vehicles shall not be certified if they generate unregulated emissions which present a potential risk to human health. The objectives of this document are to review the data from selected short-term in vitro and in vivo bioassays to (a) determine if there is evidence suggesting potential human health risk either from uncombusted emissions or from emissions of combusted motor vehicle fuels or fuel additives, (b) identify the operational variables involved in generating products of concern for human health, (c) determine the probable nature of the health effects of concern, (d) estimate the ability of short-term tests to establish human risk estimates and (e) develop a short-term bioassay program to monitor the health effects of fuel/fuel additives and unregulated combustion emissions.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
10024-97-2	NITROUS OXIDE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
412	TAXICABS
413	INTERCITY HIGHWAY TRANSPORTATION
414	TRANSPORTATION CHARTER SERVICE
415	SCHOOL BUSES
630-08-0	CARBON MONOXIDE

PB84-226992/REB
Selected Approaches to Risk Assessment for Multiple Chemical Exposures: Progress Report on Guideline Development at ECAO
EPA, Cincinnati, OH, ECAO
J.F. Stara, L.S. Erdreich
Jun 84, 117p, EPA-600/9-84-014A, PC A06/MF A01

Abstract: This report summarizes the second of a series of workshop meetings on methods for assessing human health risks from exposure to chemical mixtures sponsored by the Environmental Criteria and Assessment Office (ECAO) of the U.S. Environmental Protection Agency, July 12-13, 1983. The first workshop 'Approaches to Risk Assessment for Multiple Chemical Exposures' held in September, 1982 provided a basis for selecting methods to develop into risk assessment guidelines. Five issues were reviewed at this meeting: (1) inter-species conversion of dose and duration of exposure, (2) assessment of risk for less than lifetime exposure to carcinogens and to other toxicants, (3) additivity model for chemical mixtures, (4) methods for determination of acceptable daily intakes from quantal of continuous data, and (5) pharmacokinetic basis of route-to-route conversions. Working groups also produced recommendations for approaches to four additional problems: consideration of high risk subgroups, assessment of multiple routes of exposure, ranking the severity of effects and the use of exposure and monitoring data in health risk assessment. A symposium on this methodology is planned for the fall of 1984.

EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT
RDG REG DEVELOPMNT GUIDE

PB84-227008/REB
Selected Approaches to Risk Assessment for Multiple Chemical Exposures: Appendix
EPA, Cincinnati, OH, ECAO
J.F. Stara, L.S. Erdreich
Jun 84, 162p, EPA-600/9-84-014B, PC A08/MF A01

Abstract: This appendix to 'Selected Approaches to Risk Assessment for Multiple Chemical Mixtures: Progress Report on Guideline Development at ECAO-Cin' contains post-meeting comments on the issues sent by the peer reviewers of the workshop, plus selected references pertaining to the guidelines. All pertinent comments have been addressed in the primary report.

EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT
RDG REG DEVELOPMNT GUIDE

PB84-229673/REB
Development of a Portable Monitor for Detection of Toxic Organic Compounds
EPA, Research Triangle Park, NC, EMSL
California University, Berkeley
T. Hadeishi, et al.
Aug 84, 68p, EPA-600/4-84-073, PC A04/MF A01

Abstract: A dual beam prototype instrument was designed, constructed, tested, and delivered to the Environmental Monitoring Systems Laboratory, Research Triangle Park, North Carolina, in December 1983. It was designed for monitoring benzene with the Hg 253.7 nm line using the TALMS (tunable atomic line molecular spectrometer) technique. The instrument consisted of three units: the optical unit (weight: 52 lbs), the electronics unit (weight: 16 lbs), and a power supply (weight: 14 lbs). Tests of the performance of the benzene monitor showed linear response from the detection limit of approximately 40 to 3000 ppm-v. Searches for locations of potential TALMS signals in o-, m-, p-xylenes, bromobenzene, benzene and aniline were carried out. TALMS signals were found for p-xylene with Si, Co, and Sb lines at 252.9 nm. No signals were found at this wavelength for o- or m-xylenes. TALMS signals were also found for bromobenzene at 270.2 nm (Pt) and 266.5 nm (Fe) and aniline at 293.8 (Bi). It is recommended that further searches be carried out to extend the potential of the TALMS technique to other organic compounds and to decrease its detection limit for benzene. The use of a new related technique, Atomic Line Molecular Spectroscopy (ALMS), is also recommended.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
1330-20-7	XYLENE
62-53-3	ANILINE
71-43-2	BENZENE

PB84-229954
Health Assessment Document for Manganese
EPA, Cincinnati, OH, ECAO
H. Bilinski, et al.
Aug 84, 353p, EPA-600/8-83-013F, PC A16/MF A01

Abstract: The document evaluates data on occurrence, sources, and transport of manganese in the environment and data on metabolism, pharmacokinetics, laboratory toxicological and epidemiologic studies to determine the nature and dose response relationship of potential health effects on humans. Nationwide air sampling data indicate that mean manganese concentrations have declined from 0.11 micrograms per cu. m. in 1953-1957 to 0.033 micrograms per cu. m. in 1982. The effects of major concern to humans exposed to manganese are on neurological and on pulmonary function. The CNS effects have been observed in humans at exposure levels above 5 mg/cu. m. and are incapacitating and generally irreversible. Data are equivocal between 1 and 5 mg/cu. m. but suggest decreased prevalence. There are no reports of these effects below 0.3 mg/cu. m. exposure. Pneumonia and chronic bronchitis occur at levels which are associated with neurological effects. Reduced lung function has been reported in children exposed to an estimated 3-11 micrograms per cu. m. from emission of a ferromanganese plant. However, studies of workers exposed to 40 micrograms per cu. m. did not show respiratory symptoms. Animal studies qualitatively support pulmonary effects of manganese exposure. Respiratory symptoms are considered the critical effect based on available data.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3313	ELECTROMETALLURGICAL PRODUCTS
7439-96-5	MANGANESE

PB84-230044/REB
Evaluation of Hazardous Waste Incineration in a Lime Kiln: Rockwell Lime Company
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D.R. Day, L.A. Cox
Aug 84, 153p, EPA-600/2-84-132, PC A08/MF A01

Abstract: During a one-week test burn, hazardous waste was used as supplemental fuel and co-fired with petroleum coke in a lime kiln in eastern Wisconsin. Detailed sampling and analysis was conducted on the stack gas for principal organic hazardous constituents (POHCs), particulates, particulate metals, HCl, SO2, NOx, CO, and THC and on process streams for metals and chlorine. POHCs were also analyzed in the waste fuel. Sampling was conducted during three baseline and five waste fuel test burn days. The program objectives were to determine the destruction and removal efficiency (DRE) for each POHC, determine concentration of stack gas pollutants under baseline and waste fuel test burn conditions, determine the fate of chlorine, sulfur, and trace metals in the kiln process, and evaluate kiln performance when operating with hazardous waste as supplemental fuel. Results show average DRE's greater than 99.99 percent for each POHC and little change in pollutant emissions from baseline to waste fuel test conditions. In addition, material balance results show that 95 percent of chlorine enters the process from the limestone feed and the chlorine exits the kiln in the baghouse dust and lime product at 61 percent and 38 percent, respectively.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE
7647-01-0	HYDROGEN CHLORIDE

PB84-231075/REB
Evaluation of Air Pollution Regulatory Strategies for Gasoline Marketing Industry
EPA, Research Triangle Park, NC, OAQPS
Jul 84, 692p, EPA-450/3-84-012A, PC A99/MF E03

Abstract: The gasoline marketing industry (bulk terminals, bulk plants, service station storage tanks, and service station vehicle refueling operations) emits to the atmosphere several organic compounds of concern. These include: volatile organic compounds (VOC), which contribute to ozone formation; benzene, which has been listed as a hazardous air pollutant based on human evidence of carcinogenicity; and ethylene dichloride (EDC), ethylene dibromide (EDB), and gasoline vapors, for which there is animal evidence of carcinogenicity. This report contains an analysis of the health, emission, cost, and economic impacts of several regulatory strategies for addressing organic compound emissions from gasoline marketing sources. The regulatory strategies considered are: (1) service station controls (Stage II) for vehicle refueling emissions only in areas requiring additional VOC control to attain the national ozone ambient standard; (2) service station controls (Stage II) for vehicle refueling emissions on a nationwide basis; (3) onboard vehicle controls for vehicle refueling emissions on a nationwide basis; (4) bulk terminal, bulk plant, and service station storage tank controls on a nationwide basis; and (5) various permutations and combinations of these alternatives.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SA	SOURCE ASSESSMENT
10028-15-6	OZONE
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB84-231083/REB
Evaluation of Air Pollution Regulatory Strategies for Gasoline Marketing Industry - Executive Summary
EPA, Research Triangle Park, NC, OAQPS
Jul 84, 46p, EPA-450/3-84-012B, PC A03/MF A01

Abstract: The gasoline marketing industry emits to the atmosphere several organic compounds of concern. These include: volatile organic compounds (VOC), which contribute to ozone formation; benzene, which has been listed as a hazardous air pollutant based on human evidence of carcinogenicity; and ethylene dichloride (EDC), ethylene dibromide (EDB), and gasoline vapors, for which there is animal evidence of carcinogenicity. This report contains a summary of the analysis conducted concerning the health, emission, cost, and economic impacts of several regulatory strategies for addressing organic compound emissions from gasoline marketing sources. (The full report is contained in EPA Document PB84-231075.) The regulatory strategies evaluated are: (1) service station controls (Stage II) for vehicle refueling emissions only in areas requiring additional VOC control to attain the national ozone ambient standard; (2) service station controls (Stage II) for vehicle refueling emissions on a nationwide basis; (3) onboard vehicle controls for vehicle refueling emissions on a nationwide basis; (4) bulk terminal, bulk plant, and service station storage tank controls on a nationwide basis; and (5) various combinations of these alternatives.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
10028-15-6	OZONE
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB84-231232/REB
Nonindustrial Sources of Potentially Toxic Substances and Their Applicability to Source Apportionment Methods
EPA, Research Triangle Park, NC, OAQPS
G.E. Weant, G.S. McCormick
May 84, 97p, EPA-450/4-84-003, PC A05/MF A01

Abstract: Receptor models have been successfully used for the source apportionment of particulate matter. Based on this past success, an extension of the models to other pollutants, such as organic toxic substances, is desirable and may be possible. However, much additional work must be performed to account for the reactivities of many of the organic substances. Until the reactivities of the organic substances are considered in the receptor models, source apportionment of the reactive organic substances by exisiting receptor models is not practicable. This project examined this extension of the receptor models and collected data on the emission sources of potentially toxic substances.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
08	*FORESTRY*
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB84-232487/REB
Determination of the Thermal Decomposition Properties of 20 Selected Hazardous Organic Compounds
EPA, Cincinnati, OH, IERL
Dayton University, OH
B. Delinger, et al.
Aug 84, 204p, EPA-600/2-84-138, PC A10/MF A01

Abstract: Laboratory determined thermal decomposition profiles and kinetic data for a list of 20 selected hazardous organic compounds are reported. All data were obtained in flowing air at mean gas-phase, high-temperature zone residence times ranging from one to six seconds. The extrapolated temperatures required for 99.99% destruction of the parent compound at two seconds mean residence time, T(99.99)(2), ranged from 600C for 1,1,1-trichloroethane to 950C for acetonitrile. The process and parameters potentially controlling incineration efficiency are discussed, and four previously proposed methods of ranking compound incinerability are critically reviewed.

CL-HAZWAST	HAZARDOUS WASTES
CL-ORGANIC	ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-233295/REB
New and Revised Health Effects Test Guidelines, October 1984
EPA, Washington, DC, OPTS
Oct 84, 89p, EPA-560/6-84-002, PC A05/MF A01

Abstract: These documents constitute a set of 2 new health effects test guidelines as well as 3 existing health effects test guidelines that had been subjected to major revision. These will be added to (new guidelines) and serve as substitutes for (revised guidelines) the health effects test guidelines published by NTIS in October, 1982.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB84-234525/REB
Incineration and Treatment of Hazardous Waste: Proceedings of the Ninth Annual Research Symposium Held at Ft. Mitchell, Kentucky on May 2-4, 1983
EPA, Cincinnati, OH, IERL
Jul 84, 330p, EPA-600/9-84-015, PC A15/MF A01

Abstract: The Ninth Annual Research Symposium on land disposal, incineration and treatment of hazardous waste was held in Ft. Mitchell, Kentucky, on May 2, 3 and 4, 1983. The purposes of the symposium were (1) to provide a forum for state-of-the-art review and discussion of ongoing and recently completed research projects dealing with land disposal, incineration, and treatment of hazardous wastes; (2) to bring together people concerned with hazardous waste management who can benefit from an exchange of ideas and information; (3) to provide an area for the peer review of the Solid and Hazardous Waste Research Division's and the Energy Pollution Control Division's research programs on hazardous waste management. These Proceedings are a compilation of papers presented by the symposium speakers. The seven technical areas covered were: Incineration Emissions Measurement Methods, Lab Scale and Pilot Scale Thermal Decomposition Research, Evaluation of Emissions from Full-Scale Hazardous Waste Incienerators, Hazardous Waste Incineration in High Temperature Industrial Processes - Boilers & Kilns, Methods for Conducting Environmental and Economic Assessment of Hazardous Waste Incinerators, Innovative Hazardous Waste Control Technology, and Biological Degradation of Hazardous Waste.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-237320
VOC Emissions from Volatile Organic Liquid Storage Tanks - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 84, 267p, EPA-450/3-81-003A, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3272	CONCRETE PRODUCTS, NEC

PB84-239193
Locating and Estimating Air Emissions from Sources of Ethylene Dichloride
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 97p, EPA-450/4-84-007D, PC A05/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with ethylene dichloride. Its intended audience includes Federal, State, and local air pollution personnel and others interested in locating potential emitters of ethylene dichloride and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit ethylene dichloride, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for ethylene dichloride release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-06-2	ETHYLENE DICHLORIDE

PB84-239425/REB
Demonstration of Vapor Control Technology for Gasoline Loading of Barges
EPA, Research Triangle Park, NC, IERL
MSA Research Corp.
S.S. Gross
Aug 84, 65p, EPA-600/2-84-140, PC A04/MF A01

Abstract: The report gives results of a program to demonstrate a safe cost-effective way to control gasoline vapors emitted during barge loading. Refrigeration, carbon adsorption, oil absorption, and incineration were reviewed in terms of their safety, economics, and performance. Two barge terminals were used as the design basis for extending their existing truck loading vapor control systems (oil absorption and incineration) to include the barge loading facilities. Although fabrication drawings were prepared for both terminals, the barge vapor collection system was installed only at the terminal using incineration. Arrangements were also made to lease a barge with vapor collection piping and add equipment to reduce the likelihood of barge explosion or overfill. However, before start-up of the demonstration, the program was curtailed. The system is still in place and could be considered for future field demonstrations.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
29	PETROLEUM AND COAL PRODUCTS
42	TRUCKING AND WAREHOUSING
44	WATER TRANSPORTATION

PB84-240811
Toxicity Testing: Strategies to Determine Needs and Priorities
National Academy of Sciences
Feb 84, 389p, PC A17/MF A01
ISBN 0-309-03433-7, $22.50

Abstract: A 'select universe' of 65,725 substances that are of possible concern to the National Toxicity Program because of their potential for human exposure was identified. Through a random sampling process, 675 substances covering seven major intended-use categories were selected. From this sample, a subsample of 100 substances was selected by screening for the presence of at least some toxicity information. In-depth examination of this subsample led to the conclusion that enough toxicity and exposure information is available for a complete health-hazard assessment to be conducted on only a small fraction of the subsample. On the great majority of the substances, data considered to be essential for conducting a health-hazard assessment are lacking. By inference, similar conclusions were made for the select universe from which the sample and the subsample were drawn. This report presents criteria for selecting substances and determining toxicity-testing needs, provides estimates of those needs, and describes some useful criteria for assigning priorities for toxicity testing.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RDG	REG DEVELOPMNT GUIDE

PB84-245273/REB
Compilation of Air Toxic and Trace Metal Summary Statistics
EPA, Research Triangle Park, NC, OAQPS
W.F. Hunt, Jr., R.B. Faoro, G.M. Duggan
Jul 84, 177p, EPA-450/4-84-015, PC A09/MF A01

Abstract: The report summarized both air toxic data compiled by Dr. Manwant B. Singh of SRI International and selected trace metal and benzo(a)pyrene data contained on the National Aerometric Data Bank's (NADB) Storage and Retrieval of Aerometric Data (SAROAD). The pollutants that are summarized are listed in Tables 1 and 2. Table 1 is a list of 37 priority chemicals under assessment as potential carcinogens (Type A pollutants), while Table 2 lists 50 additional chemicals that are under assessment (Type B pollutants). Of the 37 pollutants listed in Table 1, data were obtained on 24 pollutants. This compares with finding information on only 17 of the 50 additional chemicals. In addition to the above pollutants, arsenic and benzene are summarized in Attachment A. Emphasis has been placed on obtaining long-term averages to match the concern with chronic long-term exposure of human populations to these pollutants. A long-term averaging time may be appropriate for known and suspected carcinogens depending on the compounds ability to induce significant health impacts.

CL-METAL	METALLIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
TM	TECHNICAL MONITORING
50-32-8	BENZO(A)PYRENE
7440-38-2	ARSENIC

PB84-922905
Carcinogenic Risk from Air Pollution by Engine Exhaust and Fuel Evaporation
National Cancer Institute
Aug 84, 115p, NCI/ICRDB/OK-84/05, PC $11.00/MF A01

Abstract: This ONCOLOGY OVERVIEW on the carcinogenic risk from air pollution by engine exhaust and fuel evaporation includes abstracts from the CANCERLIT data base, referencing articles published mainly from 1976 through mid-1983. These abstracts are currently available in the CANCERLIT computerized data base. The strategy used to retrieve these abstracts can be requested from the CIDAC office and entered on any MEDLARS/MEDLINE terminal system to update references in this area. This OVERVIEW encompasses epidemiologies, animal carcinogenicity and cell transformation studies, mutagenicity tests, metabolism studies, environmental levels, selected analytical techniques, and general reviews. The emphasis of the laboratory studies has been place on 'real exhaust' samples. The search strategy used did not generate a comprehensive set of abstracts on work with pure components of engine exhaust, so the assessment of the included representatives of this type of work should be given less weight than the other studies. Tests of pure fuel additives were give relatively more coverage than pure exhaust components which also enter the same environment from other combustion processes.

CL-CARCIN CARCINOGENS
NCI NATIONAL CANCER INSTITUTE
RA RISK ASSESSMENT

PB84-922907
Enzymatic Activation and Detoxication of Polycyclic Aromatic Hydrocarbons
National Cancer Institute
Aug 84, 171p, NCI/ICRDG/OK-84/07, PC$14.00/MF A01

Abstract: Oncology overviews are a service of the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, intended to facilitate and promote the exchange of information between cancer scientists by keeping them aware of literature related to their research being published by other laboratories throughout the world. Each oncology overview represents a survey of the literature associated with a selected area of cancer research. It contains abstracts of articles which have been selected and organized by researchers associated with the field. Contents: Cytochrome P-450 induced oxygenation of polycyclic aromatic hydrocarbons; Carcinogenic activity of polycyclic aromatic hydrocarbon metabolites; Epoxide hydrolases; Glutathione-s-transferase; UDP-glucuronyl transferases; Reviews.

CL-POM POLYCYCLIC ORGANIC MATTER
HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE

PB85-103018/REB
Workshop Proceedings: Approaches for Improving the Assessment of Human Genetic Risk-Human Biomonitoring
EPA, Washington, DC, OHEA
J.R. Fowle, III
Aug 84, 95p, EPA-600/9-84-016, PC A04/MF A01

Abstract: Federal laws require a consideration of adverse health effects, including mutagenicity, in arriving at regulatory decisions on chemical substances. Certain laws require balancing the consequences of these risks with the benefits provided by the use of chemical substances. This requires that risk be quantitatively assessed. Estimates of human genetic risk can be made indirectly based on data from animal experimentation and human somatic cells, but it is not practical to estimate genetic risk directly based on data from human germ cells. The indirect estimates are highly debated because of uncertainties about interspecies and interorgan extrapolations. Uncertainties in extrapolating from effects observed in animals at high experimental doses to effects likely to occur in humans at much lower environmental levels further complicate genetic risk assessment. Comparative studies are needed to define the relationships between somatic cell and germ cell events and between experimental animals and humans. This may involve selecting at least one high risk human population for study. These efforts will require a long-term coordination of efforts among the Federal agencies and among government agencies, industrial concerns, and the academic community.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

PB85-105336/REB
Characterization of Emissions from the Combustion of Wood and Alternative Fuels in a Residential Woodstove
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
R.S. Truesdale, et al.
Sep 84, 143p, EPA-600/7-84-094, PC A07/MF A01

Abstract: The report gives results of a comparison of emissions from the combustion of alternative fuels to those from wood in a residential woodstove, and of a study of the effects of woodstove operating parameters on combustion emissions. Overall, oak wood is the best fuel tested, considering both emissions and stove operation. Compressed wood logs with binders and bituminous coal produce the highest emissions of SO2, particulate, and NOx. Compressed wood logs without binders and treated lumber produce the highest PAH emissions. Important parameters affecting CO emission levels are fuel structure and, to a lesser degree, combustion air flow. SO2 emission levels are related directly to fuel sulfur content. NOx emissions are controlled by fuel nitrogen content and combustion air flow rate. Organic emissions are affected by fuel consumption rate, fuel structure, and the amount of air through the stove. Total discharge severities for PAHs measured during this study indicate that PAHs are the pollutants of highest concern in the flue gas effluent stream. PAH formation is affected by combustion air flow, firebox temperature, and fuel structure. Bioassay results indicate the presence of both mutagens and promutagens in the organic extracts of flue gas samples from both wood and coal combustion tests.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10102-43-9	NITRIC OXIDE
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE

PB85-105880/REB
Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers
EPA, Cincinnati, OH, IERL
GCA Corp.
P.F. Fennelly, et al.
Sep 84, 177p, EPA-600/2-84-150, PC A09/MF A01

Abstract: In this project, air emission tests were conducted on seven boilers in the size range 0.4 to 15 x 10 to the 6th power Btu/hr while these boilers were firing waste oil. The main purpose of the project was to document the extent to which chemical contaminants in waste oil are destroyed during the combustion process. These data are of interest because one of the more common and widespread practices for disposing of waste oils is burning as a supplemental fuel. Chemicals which were spiked into the waste oil before combustion included: chloroform, 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene, trichlorobenzene, 1-chloronaphthalene, 2,4,5-trichlorophenol, chlorotoluene.

CL-FUELOIL	FUEL OIL, WASTE DERIVED FROM
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-44-7	BENZYL CHLORIDE
106-43-4	CHLOROTOLUENE,P-
108-41-8	CHLOROTOLUENE,M-
12002-48-1	TRICHLOROBENZENE
127-18-4	TETRACHLOROETHYLENE
67-66-3	CHLOROFORM
71-55-6	TRICHLOROETHANE,1,1,1-
79-01-6	TRICHLOROETHYLENE
90-13-1	CHLORONAPHTHALENE,1-
95-49-8	CHLOROTOLUENE,O-
95-95-4	TRICHLOROPHENOL,2,4,5-

PB85-106474/XAB
Locating and Estimating Air Emissions from Sources of Chromium
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Jul 84, 237p, EPA-450/4-84-007G, PC A11/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with chromium. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of chromium and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chromium, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chromium release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
7440-47-3	CHROMIUM

PB85-110567
Petroleum Dry Cleaners - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 84, 26p, EPA-450/3-82-012B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7215	COIN-OPERATED LAUNDRIES AND CLEANING
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB85-110948/XAB
Handbook of Summaries of the National Cancer Institute/National Toxicology Program Carcinogenesis Bioassay Technical Reports. Update Number 1
National Cancer Institute
Sep 84, 91p, PC A05/MF A01

Abstract: The Handbook of Summaries of the National Cancer Institute/National Toxicology Program Carcinogenesis Bioassay Technical Reports is a compilation of the results of the carcinogenicity testing program of the National Cancer Institute and the National Toxicology Program, and contains information such as chemical structure, uses, doses, route of administration, species of test animals, target sites and types of tumors.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB85-114114/REB
Toxics '95: Outlook of Factors and Trends for Toxic Chemicals
EPA, Washington, DC, OPTS
J.F. Coates, Inc.
V.T. Coates, et al.
May 84, 233p, EPA-560/4-84-002, PC A11/MF A01

Abstract: The objective of this project is to assist the Office of Toxic Substances in identifying the factors and trends that will shape the next decade of toxic substances control and thereby support OTS' long-term policy and budget planning. The core of this document, Chapter 2, is three heuristic scenarios of the chemical industry in 1995. One scenario envisions the results of 'rapid evolution,' another the results of 'multidimensional change,' and the third a state of relative 'stability.' The authors have grounded these scenarios in their ideas generated from wide ranging reading and discussions during two Toxics '95 workshops.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
28	CHEMICALS AND ALLIED PRODUCTS

PB85-115145/XAB
Hot Flue Gas Spiking and Recovery Study for Tetrachlorodibenzodioxins (TCDD) Using Modified Method 5 and SASS (Source Assessment Sampling System) Sampling with a Simulated Incinerator
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
M. Cooke, F. DeRoos, B. Rising
Oct 84, 29p, EPA-600/2-84-159, PC A03/MF A01

Abstract: The report gives results of an evaluation of the sampling and analysis of ultratrace levels of dibenzodioxins using EPA's recommended source sampling procedures (Modified Method 5 (MM5) train and the Source Assessment Sampling System--SASS). A gas-fired combustion system was used to simulate incineration flue gas, and a precision liquid injection system was designed for the program. The precision liquid injector was used to administer dilute solutions of 1,2,3,4-tetrachlorodibenzo-p-dioxin (1,2,3,4-TCDD) directly into a hot--260C (500F)--flue gas stream. Injections occurred continuously during the sampling episode so that very low gas-phase concentrations of 1,2,3,4-TCDD were continuously mixed with the flue gases. Recoveries were measured for eight burn experiments. For all but one, the recoveries could be considered quantitative, demonstrating efficient collection by the EPA sampling systems. In one study, the components and connecting lines from a sampling device were analyzed separately to show where the 1,2,3,4-TCDD deposited in the train.

CL-DIOXIN	DIOXIN
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-115160/REB
Validation of an Emission Measurement Method for Inorganic Arsenic from Stationary Sources: Proposed Method 108. Laboratory and Field Test Evaluation
EPA, Research Triangle Park, NC, EMSL
Research Triangle Institute
T.E. Ward, et al.
Oct 84, 94p, EPA-600/4-84-080, PC A05/MF A01

Abstract: The United States Environmental Protection Agency (USEPA) has listed inorganic arsenic emissions as a hazardous air pollutant. USEPA proposed Method 108 for the measurement of these emissions from stationary sources has been subjected to validation studies in this work. Laboratory and field studies were performed. Laboratory studies included analysis of laboratory samples, preparation and analysis of liquid and filter audit samples, and sample stability determinations. Field studies included determination of the precision of the method in the measurement of inorganic arsenic emissions from stationary sources at the two industries currently subject to the USEPA proposed inorganic arsenic emissions regulations. Considering the sampling sites and the variability of process operations, these results indicate a highly acceptable degree of precision. Literature reviews to reveal the sources of emissions are reported. Recommendations are made for improving the method.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON
7440-38-2 ARSENIC

PB85-115905
Health Assessment Document for Chromium
EPA, Research Triangle Park, NC, ECAO
Jun 84, 354p, EPA-600/8-83-014F, PC A16/MF A01

Abstract: This document summarizes current, scientific information regarding the effects of chromium on man and on the environment. Specifically, this document discusses the following topics: physical and chemical properties of chromium; environmental distribution and cycling; and the metabolism, toxicology, and essentiality of chromium. In addition, this document identifies the factors most germane to assessing quantitative, human health risks.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7440-47-3 CHROMIUM

PB85-117034/REB
Mobility of Toxic Compounds from Hazardous Wastes
EPA, Las Vegas, NV, EMSL
Oak Ridge National Lab
C.W. Francis, M.P. Maskarinec, J.C. Goyert
Jul 84, 279p, EPA-600/4-84-069, PC A13/MF A01

Abstract: The objective of this research was to develop a laboratory extraction method for solid wastes that simulates concentrations of inorganic and organic constituents in leachates that result from co-disposing industrial wastes with municipal wastes in landfills (co-disposal in a landfill containing 95:5 ratio of municipal to industrial waste, respectively). The intent was to produce a scientific rationale and a data base from which an extraction method can be selected to simulate leaching of solid wastes co-disposed with municipal wastes.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-120848/XAB
Biological Effects of Radiofrequency Radiation
EPA, Research Triangle Park, NC, HERL
D.F. Cahill, J.A. Elder
Sep 84, 27lp, EPA-600/8-83-026F, PC A12/MF A01

Abstract: The document presents a critical review of the available literature on the biological effects of radiofrequency (RF) radiation. The objective was to summarize and evaluate the existing database for use in developing RF-radiation exposure guidance for the general public. The frequency range of concern in this document is 0.5 MHz to 100 GHz, which includes nearly all the significant sources of population exposure to RF radiation, except 60-Hz electrical power systems. Research reports that are judged to be credible according to a set of objective criteria are examined for the relation between the RF energy absorbed and the presence or absence of biological effects. The reported consequences of the interaction between RF radiation and biological systems are examined from two perspectives: whole-body-averaged specific absorption rate (SAR) and RF-energy-induced core-temperature increases.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB85-121119/REB
Capital and O and M (Operation/Maintenance) Cost Relationships for Hazardous Waste Incineration
EPA, Cincinnati, OH, IERL
Acurex Corp.
R.J. McCormick, R.J. DeRosier
Oct 84, 217p, EPA-600/2-84-175. PC A10/MF A01

Abstract: The objective of this study was to develop relationships between capital and operation/maintenance (O&M) costs for hazardous waste incineration and the various waste-specific, design-specific, and operational factors that affect these costs. These cost relationships have been designed so that total capital investment, annual O&M cost, and unit (dollars per lb. etc.) disposal cost estimates can be calculated for a variety of waste compositions, different incineration system designs and configurations, and a wide range of system operating conditions and performance requirements. The input data specifications include physical/chemical waste characteristics and throughput rates, generic incinerator design type, capacity, and operating temperature, particulate and acid gas removal requirements, energy recovery utilization, and operating schedule.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-121143/REB
Atmospheric Transport of Toxaphene to Lake Michigan
EPA, Duluth, MN, ERL
University of Michigan, Ann Arbor
C.P. Rice, P.J. Samson, G. Noguchi
Nov 84, 68p, EPA-600/3-84-101, PC A04/MF A01

Abstract: Atmospheric levels of toxaphene were monitored during the summer and fall of 1981 at 4 locations: Greenville, Mississippi, St. Louis, Missouri, Bridgman, Michigan, and Beaver Island, Michigan. Each collection was conducted by continuously sampling air during the first two weeks of the months of August, September, October, and November. The collected toxaphene was analyzed on a capillary equipped electron capture gas chromatograph. The average concentrations over the entire sampling period for each site were 7.39 ng/cu m in Greenville, 1.18 ng/cu m in St. Louis, and 0.27 ng/cu m for Lake Michigan (Bridgman and Beaver Island combined). The summer versus fall fluctuations in amount of toxaphene at each site was 0.44 ng/cu m versus 0.26 ng/cu m for Bridgman; 1.73 ng/cu m versus 0.63 ng/cu m for St. Louis; and 9.05 ng/cu m versus 4.34 ng/cu m for Greenville. The maximum monthly average occurred in September for all of these collections. Diagnostic modeling to describe possible air transport of toxaphene showed that at all receptor locations the air transport corridor for toxaphene was associated with southerly winds.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
8001-35-2	TOXAPHENE

PB85-121184/REB
Systems Reliability and Performance: Pilot-Scale Incineration of Chlorinated Benzenes at the Combustion Research Facility
EPA, Cincinnati, OH, IERL
Versar, Inc.
F.C. Whitmore, et al.
Oct 84, 240p, EPA-600/2-84-174, PC A11/MF A01

Abstract: A series of 34 test burns was conducted between August 1983 and January 1984 in the pilot-scale rotary kiln incineration system at the USEPA Combustion Research Facility (CRF), using chlorinated benzenes as surrogate Principal Organic Hazardous Components (POHCs), over a range of feed compositions, POHC feed rates, rotary kiln temeratures, and afterburner temperatures. The CRF rotary kiln system consistently produced Destruction and Removal Efficiency (DRE) values above 99.99% for the chlorinated benzene POHCs. DRE values below 99.99% were obtained during several types of failure mode simulations (flame-out in kiln or afterburner). A large number of Products of Incomplete Combustion (PICs) were produced and identified, a number of which are toxic or possibly carcinogenic. Deliberate reduction of excess air levels resulted in significant production of soot and PICs but did not produce higher levels of CO in the combustion gases. Hot-zone sampling just downstream of each of the two combustion chambers provided for the detailed study of PIC formation and will facilitate the future development of models of the incineration process. Helium injection techniques were used to determine combustion gas flow rates and to measure residence time distributions (which directly affect destruction efficiencies).

CL-PCB	POLYCHLORINATED BIPHENYLS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYLS
630-08-0	CARBON MONOXIDE
95	ENVIRONMENTAL QUALITY AND HOUSING
951	ENVIRONMENTAL QUALITY
9511	AIR, WATER & SOLID WASTE MANAGEMENT

PB85-122422/REB
Environmental Effects of Utilizing Solid Waste as a Supplementary Power Plant Fuel
EPA, Cincinnati, OH, IERL
Battelle Columbus Labs
D.A. Vaughan, et al.
Nov 84, 64p, EPA-600/2-84-178, PC A04/MF A01

Abstract: The results of 3 years of research on the utilization of shredded and magnetically separated municipal refuse to supplement high-sulfur coal as fuel in a stoker-fired boiler are presented. During the first half of the research, a refuse handling and furnace feed system consisting of argiculture crop handling equipment was used. With this equipment the feasibility of blowing shredded refuse into a boiler and burning it completely on a traveling grate was demonstrated. Corrosion probe exposures were used to show the effectiveness of cofiring to reduce short-term corrosion of boiler tube metals. Reduced emissions of SO2 from the high-sulfur coal also resulted from dilution of the coal with refuse and by action of alkaline components of refuse.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB85-122455/REB
Effects of Pollutants on Human Viral Respiratory Disease
EPA, Research Triangle Park, NC, HERL
North Carolina University at Chapel Hill
W.A. Clyde, et al.
Nov 84, 30p, EPA-600/1-84-015, PC A03/MF A01

Abstract: Many epidemiologic studies have shown excessive respiratory disease morbidity in areas of high atmospheric pollution. This study was designed to develop and characterize an animal model and investigate the possible interactive effects of infection and particulate air pollutants using small laboratory animals. Models of human parainfluenza virus type 3 disease were established by aerosol inoculation of hamsters and cotton rats. The temporal course of the following were examined: lung virus titers; pulmonary histopathology; alveolar macrophage function; changes in pulmonary mechanics; serum antibody development and upper respiratory tract histopathology. Animals were exposed acutely (2 hours) to ammonium nitrate or lead oxide respirable aerosols before or following viral inoculation. Exposures ranging from 59-66 mg/cu m but not 0.76 mg/cu m of the nitrate resulted in a one-day extension of viral replication and concommitant retardation of peribronchial lymphocytic infiltration. Lead oxide exposures at levels greater than 2,350 micrograms/cu m increased lung virus titers and serum antibody titers. The models developed in these studies may be useful for work on chronic exposure to the same or other pollutants and on the pathogenesis of virus/pollutant interactions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1332-37-2	IRON OXIDE
6484-52-2	AMMONIUM NITRATE

PB85-123925/XAB
Mercury Health Effects Update: Health Issue Assessment
EPA, Research Triangle Park, NC, ECAO
T. Clarkson, et al.
Aug 84, 152p, EPA-600/8-84-019F, PC A08/MF A01

Abstract: This report reviews and evaluates the scientific information on the potential health effects from mercury exposure, with emphasis on those effects associated with human chronic inhalation exposures. The findings are based on a review of the scientific literature since the promulgation of the 1973 National Emission Standard for Mercury. This report consists of six chapters that provide a cohesive discussion of all aspects of mercury exposure and focus upon those data thought to be most useful and relevant for human health risk assessment purposes.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7439-97-6	MERCURY

PB85-124154/REB
Characterization of Heavy-Duty Motor Vehicle Emissions Under Transient Driving Conditions
EPA, Research Triangle Park, NC, ESRL
Southwest Research Institute
M.A. Warner-Selph, H.E. Dietzmann
Nov 84, 166p, EPA-600/3-84-104, PC A08/MF A01

Abstract: The objective of this program was to characterize heavy-duty diesel truck and bus emissions produced during transient driving cycles. In the initial phase of the program an improved road-load simulation method was developed for use in operating large trucks on a chassis dynamometer. This method was used in testing vehicles on the chassis dynamometer. The second phase of testing involved operation of six vehicles on the chassis dynamometer removal of the engine and testing of the engines. Chassis emissions were then compared to engine emissions. Additionally, chassis tests were conducted over a range of dynamometer inertia settings for two of the six vehicles for the purpose of comparison with engine emissions. Baseline emissions were also measured on six buses, five single-axle tractors, and 17 dual-axle tractors over the chassis version of the transient cycle. Regulated emissions and several unregulated emissions were measured on baseline tests. Unregulated emissions included particulate, aldehydes and ketones, phenols, DOAS odor, various elements, nitropyrenes, and Ames mutagenic response.

CL-DIESEL	DIESEL
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
417	BUS TERMINAL AND SERVICE FACILITIES
42	TRUCKING AND WAREHOUSING
421	TRUCKING, LOCAL AND LONG DISTANCE

PB85-124196/XAB
Health Assessment Document for Carbon Tetrachloride
EPA, Cincinnati, OH, ECAO
C.T. DeRosa, et al.
Sep 84, 321p, EPA-600/8-82-001F, PC A14/MF A01

Abstract: Carbon tetrachloride (CC14) is a haloalkane with a wide range of industrial and chemical applications. Its presence in the atmosphere and in water appears to be of anthropogenic origin. It is readily absorbed through the lung, gastrointestinal tract and skin and, therefore, poses a hazard to human health. This document is an assessment of the literature available up to March 1983, with the exception of the effect of CC14 on stratospheric ozone, to reflect the most recent development in this area. The scientific literature was inventoried, key studies were evaluated and summaries and conclusions were prepared to qualitatively identify the chemical's toxicity and related characteristics. Observed effect levels and dose-response relationships are discussed evaluating the potential toxicity of CC14.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE

PB85-124204/REB
Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Steel Plants - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 84, 43P, EPA-450/3-82-020B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designation of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES
3322	MALLEABLE IRON FOUNDRIES
3324	STEEL INVESTMENT FOUNDRIES
3325	SIC - 3325 STEEL FOUNDRIES, NEC

PB85-124915/XAB
Health Assessment Document for Hexachlorocyclopentadiene
EPA, Cincinnati, OH, ECAO
D.J. Reisman
Nov 84, 177p, EPA-600/8-84-001F, PC A09/MF A01

Abstract: The Office of Health and Environmental Assessment of the Office of Research and Development has prepared this health assessment document (HAD) at the request of the Office of Air Quality Planning and Standards. Hexachlorocyclopentadiene (HEX) is an intermediate in the pesticide and flame retardant manufacturing processes and is currently being studied by the Environmental Protection Agency (EPA) to determine if it should be regulated as a hazardous air pollutant under the Clean Air Act. The scientific literature and key studies have been reviewed and evaluated and summaries and conclusions have been directed at the health effects from exposure to HEX. This peer-reviewed document contains information on HEX covering toxicity, environmental fate and transport, aquatic effects, mutagenicity, epidemiology, teratogenicity and other health effects data. The data base is neither extensive nor adequate for assessing the carcinogenicity of long-term health effects of acute or low-level chronic exposure to HEX.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
22	TEXTILE MILL PRODUCTS
226	TEXTILE FINISHING, EXCEPT WOOL
229	MISCELLANEOUS TEXTILE GOODS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
77-47-4	HEXACHLOROCYCLOPENTADIENE

PB85-125516/XAB
Asbestiform Fibers: Nonoccupational Health Risks
National Academy of Sciences
Feb 84, 354p, PC A16/MF A01
ISBN 0-309-03446-9, $22.50

Abstract: The committee considered the health risks posed by nonoccupational airborne exposures to asbestos and other natural or synthetic asbestiform fibers. The issue is important because many people may be exposed to these materials, although at relatively low levels. The EPA asked the NAS to undertake a study with two goals: to evaluate the human health risks associated with nonoccupational exposure to asbestiform fibers, with emphasis on inhalation of outdoor and indoor air; and to determine the extent to which the physical-chemical properties of the fibers may be associated with the development of various human diseases and the extent to which such information may be incorporated into assessing health risks resulting from exposure to the fibers. The committee found that much more information is available about asbestos than about the other materials of concern. Nonoccupational exposure to asbestiform fibers in air present a risk to human health. The extent of the risk is highly uncertain, depending on the nature and amount of exposure and other factors. The committee made several recommendations, i.e., systematic monitoring and characterization of asbestiform fibers with standardized methods should be undertaken on nonoccupational environments; cessation of cigarette smoking should be encouraged.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
1332-21-4	ASBESTOS

PB85-126126/REB
Characterization of Emissions from Advanced Automotive Power Plant Concepts
EPA, Research Triangle Park, NC, ESRL
Southwest Research Institute
D.A. Montalvo, C.T. Hare
Nov 84, 485p, EPA-600/3-84-108, PC A21/MF A01

Abstract: Emissions from three diesel cars, (a prototype naturally-aspirated Fiat 131, a prototype turbocharged Fiat 131, and a 1981 Oldsmobile Cutlass Supreme), using two fuel formulations were assessed. Each Fiat was tested with and without a prototype catalytic trap. Vehicle operating procedures used for test purposes included the 1981 Federal Test Procedures as well as the Highway Fuel Economy Test, the New York City Cycle, and an 85 km/hr steady-state cruise. Organic solubles in particulate were analyzed for various constituents and characteristics including fractionation by relative polarity, benzo(a)pyrene (BaP), and mutagenic activity by Ames bioassay. Application of the catalytic trap oxidizer system to the Fiat prototypes resulted in significant reductions of organic and carbon monoxide emissions under all transient driving conditions examined. Total particulate emissions were reduced an average of 55 percent with the turbocharged engine and 65 percent with the naturally-aspirated engine. The Ames assay mutagenic response (revertants/microgram) of the particulate phase organics was elevated by the catalytic exhaust aftertreatment device; however the emission rates (revertants/km) were reduced an average of 66 percent with the turbocharged and 73 percent with the naturally-aspirated engines.

CL-ALDEHYDE	ALDEHYDES
CL-AMINE	AMINES
CL-DIESEL	DIESEL
CL-ORGANIC	ORGANIC COMPOUNDS
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
50-32-8	BENZO(A)PYRENE
630-08-0	CARBON MONOXIDE

PB85-129500/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators.
Volume 1: Executive Summary
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, G. Jungclaus
Nov 84, 43p, EPA-600/2-84-181A, PC A03/MF A01

Abstract: This report, Volume 1, Executive Summary, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129518/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators.
Volume 2: Incinerator Performance Results.
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, G. Jungclaus
Nov 84, 149p, EPA-600/2-84-181B, PC A07/MF A01

Abstract: This report, Volume II, Incinerator Performance Results, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129526/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators.
Volume 3: Appendices A and B
EPA, Cincinnati, OH, IERL
Midwest Reasearch Institute
A. Trenholm, P. Gorman, G. Jungclaus
Nov 84, 175p, EPA-600/2-84-181C, PC A08/MF A01

Abstract: This report, Volume III, Appendices A and B, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129534/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators.
Volume 4: Appendices C through J.
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, C. Jungclaus
Nov 84, 360p, EPA-600/2-84-181D, PC A16/MF A01

Abstract: This report, Volume IV, Appendices C through J, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129542/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators. Volume 5: Appendices K and L
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, C. Jungclaus
Nov 84, 189p, EPA-600/2-84-181E, PC A09/MF A01

Abstract: This report, Volume V, Appendices K and L, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-132363/XAB
Health Assessment Document for Epichlorohydrin
EPA, Research Triangle Park, NC, ECAO
Dynamac Corp.
Dec 84, 246p, EPA-600/8-83-032F, PC A11/MF A01

Abstract: This document summarizes current scientific information regarding the health and environmental effects of epichlorohydrin. Specifically, this document discusses the following topics: metabolism and toxicology; and factors most relevant to assessing quantitative health risks, particularly risk of cancer. Epichlorohydrin is moderately toxic by oral, dermal, and inhalation routes of exposure. Long-term animal studies provide evidence that epichlorohydrin should be considered a potential human carcinogen (IARC category 2B). Epichlorohydrin causes gene and chromosomal mutations in vitro and in vivo, and has been shown to be clastogenic in human lymphocytes. Epichlorohydrin was not teratogenic in mice, rats, or rabbits, but was embryotoxic at doses which were toxic to the pregnant mouse. Transient infertility was observed in male rats exposed to epichlorohydrin. Epichlorohydrin is not expected to persist in air, water, or soil because of hydrolysis. The atmospheric residence time was calculated to be 5.8 days.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
106-89-8	EPICHLOROHYDRIN

PB85-132744/REB
Radionuclides: Regulatory Impact Analysis of Emission Standards for Elemental Phosphorus Plants
EPA, Washington, DC
Faucett (Jack) Associates, Inc.
Oct 84, 84p, EPA-520/1-84-025, PC A05/MF A01

Abstract: The standard proposed for elemental Phosphorus plants, the subject of the analysis, was 1 curie per year of polonium-210 for each source. There are currently six plants producing elemental phosphorus. EPA sampling of emissions of four plants and estimates of emissions at the remaining two indicate that, with current output levels and operating characteristics, only two plants will be affected by a 1 curie per year standard. Three alternatives to the 1 curie per year standard were considered in performing the regulatory impact analysis: 2.5 Ci/year, 10 Ci/year and no control. For each of these control options and for each plant, the analysis considered the technologies that are available to reduce emissions to the required level, examined the costs of these technologies, identified the least-cost options evaluated the cost per fatal cancer eliminated, and assessed the economic impacts of the regulation.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
13981-52-7	POLONIUM-210
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-134500/XAB
Radionuclides: Response to Comments for Final Rules. Volume 1
EPA, Washington, DC
Oct 84, 145p, EPA-521/84-023-1, PC A07/MF A01

Abstract: On April 6, 1983, EPA published in the Federal Register (48 FR 15076) proposed standards for certain categories of radionuclides. This report summarized major concerns and issues arising from written and oral comments on the April 6 proposed, as well as EPA's response to these.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-134518/XAB
Radionuclides: Response to Comments for Final Rules. Volume 2
EPA, Washington, DC
Oct 84, 46p, EPA-520/1-84-023-2, PC A03/MF A01

Abstract: In December 1983, the Administrator of the EPA formed a Science Advisory Board Subcommittee to review the methodology used by the Office of Radiation Programs in assessing health risks from airborne release of radionuclides. In addition, new technical data was gathered which included the results of radionuclide emission testing at calciners at three elemental phosphorus plants. New information also became available on the cost and effectiveness of methods for reducing radon emissions from underground uranium mines. Because the Agency intended to consider this new information in the ongoing rulemaking, public comment was requested on the new information, (49 FR 33695, August 25, 1984). This document summarized public comment on the new information and EPA's response to them. In addition, Section 2 of the document contains EPA's response to the Science Advisory Board Subcommittee's comments.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-135812/REB
Chemical Substances Information Network (CSIN): An Overview
Interagency Toxic Substances Data Committee
Washington, DC, 29p, PC A03/MF A01

Abstract: The Chemical Substances Information Network (CSIN) is a sophisticated switching network based on heterogeneous distributed data base management and networking concepts which were only theory less than a decade ago. CSIN offers efficient and effective access to on-line information resources (systems) containing data and information relevant to chemical substances, as well as information covering other scientific disciplines and subject matters. The purposes on CSIN are two-fold; first to meet the growing chemical data and information requirements of industry, academe, government (Federal and State), public interest groups, and others, and secondly to reduce the burden on the private and public sector communities when responding to complex Federal legislation oriented to chemical substances. CSIN is not another data base, but is a gateway system. CSIN links many independent and autonomous data and bibliographic computer systems oriented to chemical substances, establishing a 'library of systems.' Users may converse with any or all systems interfaced by CSIN without prior knowledge of or training on these independent systems, regardless of the hardward, software data, formats, or protocols of these information resources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB85-136653/REB
Asbestos in Buildings: A National Survey of Asbestos-Containing Friable Materials
EPA, Washington, DC, OTS
Battelle Columbus Labs
J. Strenio, et al.
Oct 84, 236p, EPA-560/5-84-006, PC A11/MF A01

Abstract: A nationally representative sample of 231 buildings at 10 sites were inspected for potentially asbestos-containing materials. Bulk samples (1,510) were taken and analyzed by Polarized Light Microscopy. Estimates were made of the number and percent of buildings with asbestos-containing friable materials, the square footage of sub materials, and the percent asbestos content of the materials. In buildings constructed prior to 1960, ACFM was concentrated primarily in pipe and boiler insulation; in buildings constructed between 1960 and the early 1970's, ACFM was concentrated primarily in sprayed-on or trowelled-on materials. In 1973, EPA banned the use of asbestos thermal and acoustical insulation materials except for decorative purposes, and in 1978 EPA banned them for all purposes.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1332-21-4	ASBESTOS

PB85-137107/REB
Hazardous/Toxic Air Pollutant Control Technology: A Literature Review
EPA, Research Triangle Park, NC, IERL
Radian Corp.
G.S. Shareef, A.J. Miles, B.K. Post
Dec 84, 275p, EPA-600/2-84-194, PC A12/MF A01

Abstract: The report summarized literature on hazardous/toxic air pollutant (HAP) sources and control techniques employed in their reduction and/or destruction. The information was abstracted from an extensive computerized and manual literature search and data base development study. The primary emphasis of the report is on HAP control technology. However, a brief summary of major source categories that emit HAPs is also included. About 70 hazardous/toxic compounds or groups of compounds are covered in this study; most are volatile organic compounds. In the HAP control technology data base, most of the information is for the Synthetic Organic Chemical Manufacturing Industry (SOCMI) source category. However, data are also available for the combustion, solvent use, and metal processing industries. The major add-on control techniques for volatile organic HAPs discusssed in this report are combustion, absorption, adsorption, and condensation. Combustion techniques include thermal and catalytic incineration, flaring, and disposal of waste streams in boilers and process heaters. The add-on control devices identified in the literature for control of particulate HAP emissions are electrostatic precipitators, baghouses, wet scrubbers, and cyclones. A list of references, and their abstracts, are included.

CL-HAZWAST	HAZARDOUS WASTES
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-138279/REB
Hazardous Air Pollutants: Dry-Deposition Phenomena
EPA, Research Triangle Park, NC, ESRL
Battelle Pacific Northwest Labs
G.A. Sehmel, R.N. Lee, T.W. Horst
Dec 84, 80p, EPA-600/3-84-114, PC A05/MF A01

Abstract: Dry-deposition rates were evaluated for two hazardous organic air pollutants, nitrobenzene and perchloroethylene, to determine their potential for removal from the atmosphere to three building material sufraces, cement, tar paper, and vinyl asbestos tile. Dry-deposition experiments were conducted in two stirred chambers. Building material was placed on the bottom of the stirred chambers, and removal rates were evaluated by introducing the organic air pollutant along with nondepositing sulfur hexafluoride (SF6) tracer gas into a stirred chamber. Changes in airborne concentrations with time were then monitored. Because the HAP removal rates were small, sulfur hexafluoride tracer gas was used to evaluate the rates of leakage from the SC in order to correct the deposition rates. When HAP wall losses were assumed negligible, HAP concentration decreases (corrected using the SF6 leakage rate) ranged from near 0 to 3%/h. Dry-deposition velocities were calculated from the rate-of-change over time of the airborne concentrations. The calculated deposition velocities were consistently small, approximately .0001 cm/sec or less. These deposition velocities reflect mostly substrate resistance, but the fan speed could not be increased sufficiently to ensure in the limit that only substrate resistance was measured.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
127-18-4	TETRACHLOROETHYLENE
98-95-3	NITROBENZENE

PB85-138535/REB
Thermal Degradation Products from Dielectric Fluids
EPA, Washington, DC, OTS
Midwest Research Institute
M.D. Erickson, et al.
Nov 84, 100p, EPA-560/5-84-009, PC A05/MF A01

Abstract: Electrical transformer fires can cause extensive smoke damage, especially when polychlorinated biphenyls (PCBs) are involved since they can form polychlorinated dibenzofurans (PCDFs) and other toxic by-products. To characterize the potential for by-product formation, this study was undertaken to optimize conditions for PCDF formation from PCBs and to study the potential for formation of PCDFs and polychlorinated dibenzodioxins (PCDDs) from combustion of selected dieletric fluids, including those contaminated with PCBs. A bench-scale thermal destruction system was used to combust the samples. The dielectric fluid was fed continuously using a syringe pump. The XAD-2 trap and a rinse of connective tubing were Soxhlet extracted. Extracts were cleaned using column chromatorgraphy to isolate the PCDFs and PCDDs. All samples were analyzed for PCDFs using HRGC/EIMS in the selected ion monitoring mode. The results of this work indicate that the optimum conditions for PCDF formation from PCBs are near 675C for 0.8 s or longer, with 8% excess oxygen. Under these conditions, percent levels of PCDFs are formed from mineral oil or silicone oil contaminated with PCBs at 5ppm or greater.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
11097-69-1	AROCLOR 1254
53469-21-9	POLYCHLORINATED BIPHENYLS

PB85-138576/REB
Technical Overview of the Concept of Disposing of Hazardous Wastes in Industrial Boilers
EPA, Cincinnati, OH, IERL
Acurex Corp.
C. Castaldini, et al.
Dec 84, 198p, EPA-600/2-84-197, PC A09/MF A01

Abstract: The use of industrial boilers for the destruction of hazardous wastes is increasing at a rapid rate. This is partly due to the fact that the practice changes a 'negative value' waste material into a 'positive value' fuel and partly to the fact that current RCRA regulations specifically exempt facilities that burn wastes in energy producing operations from complying with RCRA incineration mandates. This study evaluated the concept with the purpose of answering the following questions: What is the present and projected magnitude of hazardous waste combustion in boilers? Which waste materials and boiler types are the most compatible, and what quantities of these are available? What are the potential mechanical difficulties or environmental hazards associated with this practice?

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-138618/REB
Trace Metal Retention When Firing Hazardous Waste in a Fluidized-Bed Incinerator
EPA, Research Triangle Park, NC, AAERL
Battelle Columbus Labs
R.D. Lift, T.L. Tewksbury
Dec 84, 46p, EPA-600/2-84-198, PC A06/MF A01

Abstract: The report describes a bench-scale fluidized-bed incinerator that will capture trace metals on the bed material when firing hazardous waste. The design is based on limited tests at an existing laboratory facility. Operating conditions, operating procedures, and equipment design are established for greater than 90 percent trace metal capture on the bed material. A surrogate hazardous waste, paint containing lead chromate, was used in the tests. Other trace metals were identified that can be captured by agglomeration on a silica bed material. The design provides the capability of operating in either a single or double stage configuration so that various bed materials or operating conditions can be used to capture different trace metals or to provide more effective capture. The bench-scale fluidized-bed incinerator will have the flexibility to operate with several fuels, bed materials, and fluxing agents, over a wide range of operating conditions.

CL-HAZWAST	HAZARDOUS WASTES
CL-METAL	METALLIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-138626/REB
Hazardous Air Pollutants: Wet Removal Rates and Mechanisms
EPA, Research Triangle Park, NC, ASRL
Battelle Pacific Northwest Labs
M.T. Dana, R.N. Lee, J.M. Hales
Dec 84, 106p, EPA-600/3-84-113, PC A06/MF A01

Abstract: Fourteen hazardous organic air pollutants were evaluated for their potentials to be wet deposited by precipitation scavenging. This effort included a survey of solubilities (Henry's Law constants) in the literature, measurement of solubilities of three selected species, development and documentation of a general deposition model (MPADD) which includes dry deposition and plume depletion, and performance of scavenging field experiments to provide a data base for testing the model. Solubility parameters (dimensionless ratio of aqueous concentration to air concentration) for ethylene oxide, nitrobenzene, and methyl chloroform were measured in rainwater at two temperatures each. Four field experiments were conducted: three using nitrobenzene and one involving methyl chloroform. Agreement of measured concentrations with model-calculated values was good for nitrobenzene, despite larger than desired experimental uncertainties during two of the releases. Analytical difficulties resulted in only a few measurements of methyl chloroform rainwater concentrations. These results and sample test runs of the Multi-Pollutant Atmospheric Deposition and Depletion (MPADD) model, show that wet deposition should have little effect on plumes of non-reactive hazardous gases within kilometers of their sources.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
71-55-6	TRICHLOROETHANE,1,1,1-
75-21-8	ETHYLENE OXIDE
98-95-3	NITROBENZENE

PB85-142016/REB
Review and Evaluation of the Evidence for Cancer Associated with Air Pollution
EPA, Research Triangle Park, NC, OAQPS
Clement Associates, Inc.
I.C.T. Nisbet, et al.
Nov 84, 295p, EPA-450/5-83-006R, PC A13/MF A01

Abstract: This final report is a comprehensive summary and compilation of the scientific evidence related to the hypothesis that cancer rates in human populations are associated with their exposure to pollutants present in the ambient air. Critical comments on the strength and weaknesses of the studies are presented and general methodological problems in the conduct and interpretation of the studies are discussed. No overall judgments about the weight of the entire body of scientific evidence are presented.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1332-21-4	ASBESTOS
28	CHEMICALS AND ALLIED PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
7440-38-2	ARSENIC
75-01-4	VINYL CHLORIDE

PB85-143261/REB
Technical Assistance Document for Monitoring Sulfuric Acid Vapor from Stationary Sources
EPA, Research Triangle Park, NC, EMSL
Engineering-Science, Inc.
W.T. Winberry
Jan 85, 150p, EPA-600/4-85-005, PC A07/MF A01

Abstract: When fuels containing sulfur are burned, almost quantitative formation of sulfur dioxide (SO2) occurs. As much as 5-8% of the sulfur dioxide emitted may be converted to sulfur trioxide either by atomic oxygen in the combustion zone or by efficient catalysis of heavy metal contaminants in the fuel oil. At moisture levels above four percent and temperature below 300F (149C), theoretical models indicate that the sulfur trioxide quickly combines with the water vapor present to form sulfuric acid vapor. The composition and concentration of the chemical species emitted are influenced by fuel characteristics, boiler design and operation, and emission controls. It is precisely this combination of emissions of different species of sulfates that has hindered the characterization and measurement of sulfuric acid vapor from combustion sources. This document describes the different types of monitoring principles with their advantages and limitations. Evaluation of different monitoring techniques--both laboratory and field evaluation--are included in the document. Also included is a section dealing with generating known concentration of sulfuric acid vapor used in evaluating monitoring techniques.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON
7446-09-5 SULFUR DIOXIDE
7664-93-9 SULFURIC ACID

PB85-144046/REB
Evaluation of Cryogenic Trapping As a Means for Collecting Organic Compounds in Ambient Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
M. Holdren, et al.
Jan 85, 57p, EPA-600/4-85-002, PC A04/MF A01

Abstract: The methodology used in reduced temperature preconcentration of volatile organic compounds has been tested using a prototype automated gas chromatographic system. Mixtures of sixteen volatile organic compounds in humidified zero air were passed through a Nafion tube dryer and the organic compounds were collected on a reduced-temperature trap. The dryer reduced the water concentration without significantly affecting the integrity of the trace organic species. The selective reduction of water vapor improves the chromatography of the trace organics and likewise permits processing larger sample volumes. Statistical analysis of the data indicated that the canisters would serve as acceptable storage vessels for most of the volatile organic compounds tested.

CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB85-144053/XAB
Proceedings: National Symposium on Recent Advances in Pollutant Monitoring of Ambient Air and Stationary Sources, Held at Radisson Plaza Raleigh Hotel, on May 8-10, 1984
EPA, Research Triangle Park, NC, EMSL
Nov 84, 213p, EPA-600/9-84-019, PC A10/MF A01

Abstract: The fourth annual national symposium sponsored by EPA's Environmental Monitoring Systems Laboratory was held May 8-10, 1984 in Raleigh, North Carolina. In seven sessions over three days, papers and discussions focused on state-of-the-art systems for monitoring source emissions, ambient air, acid deposition, hazardous emissions and personal monitoring. This symposium is part of a continuing effort to explore recent advances in pollutant monitoring of ambient air and stationary sources. It serves as a forum for exchange of ideas and scientific information. In response to the Agency regulatory needs, this symposium focused on acid deposition, personal exposure and toxic substances. This publication is intended to assist those researchers interested in furthering the science of air monitoring. The papers in this proceedings are abbreviated versions of those presented by the speakers. Several papers are omitted because the speakers did not submit them in time for the agency's peer review.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB85-150332/XAB
Health Assessment Document for Chlorinated Benzenes
EPA, Cincinnati, OH, ECAO
W.B. Peirano
Jan 85, 606p, EPA-600/8-84-015F, PC A99/MF A01

Abstract: The chlorinated benzenes are a group of 12 compounds (monochlorobenzene) 1,2-, 1,3-, 1,4-dichlorobenzene; 1,2,3-, 1,2,4-, 1,3,5-trichlorobenzene; hexachlorobenzene). Environmental contamination results from emissions to air and water during the manufacture and use of the chlorinated benzenes and from the disposal of wastes from a number of processes. These compounds tend to accumulate in lipid-containing tissues of animals and humans. The ubiquitous environmetal distribution of the chlorinated benzenes and their bioconcentration in humans are a basis for concern over the consequences of chronic exposure to human health. The first portion of the health assessment document is devoted to the chlorinated benzenes in the environment: physical and chemical properties, the monitoring of the chlorinated benzenes in various media, natural and human-made sources, the transport and distribution of the chlorinated benzenes within environmental media, and the levels of exposure. The second part is devoted to biological responses in laboratory animals and humans including metabolism, pharmacokinetics, as well as the toxicological effects of the chlorinated benzenes. This document forms the scientific basis for a proposed decision by EPA concerning the regulation of chlorinated benzenes under the Clean Air Act.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
108-90-7 MONOCHLOROBENZENE
28 CHEMICALS AND ALLIED PRODUCTS
281 INDUSTRIAL INORGANIC CHEMICALS

PB85-150860/REB
Studies of the Tumor Initiating, Tumor Promoting, and Tumor Co-Initiating Properties of Respiratory Carcinogens
EPA, Research Triangle Park, NC, HERL
S. Nesnow, L.L. Triplett, T.J. Slaga
Dec 84, 26p, EPA-600/D-84-290, PC A03/MF A01

Abstract: Coke oven emissions, roofing tar emissions, and cigarette smoke represent three diverse human respiratory carcinogens for which good epidemiological information is available. Although the carcinogenic effects of these emissions in experimental animals have been established, the tumor promoting and cocarcinogenic effects have been less well studied, especially those of coke oven and roofing tar emissions. The tumor promoting effects of a coke oven sample and a roofing tar emission sample were investigated by using SENCAR mouse skin as the experimental test system. The coke oven sample was approximately 12 times as active as the roofing tar sample as a tumor promoter in mouse skin initiated with benzo(a)pyrene (B(a)P). Cocarcinogenesis was studied in SENCAR mice by using the tumor co-initiation protocol. Mice initiated with B(a)P and pyrene and subsequently promoted weekly with and 12-O-tetradecanoyl-phorbol-13-acetate (TPA) produced more papillomas than mice initiated with B(a)P and promoted with TPA. A roofing tar sample and cigarette smoke condensate each produced synergistic effects with B(a)P on TPA-promoted SENCAR mouse skin, and an organic extract of diesel particulate emissions and B(a)P had attenuative effects.

CL-CARCIN	CARCINOGENS
CL-COE	COKE OVEN EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB85-153534/XAB
Size Distributions of Elemental Carbon in Atmospheric Aerosols
EPA, Research Triangle Park, NC, ASRL
California Univ., Los Angeles
A.H. Miguel, S.K. Friedlander
Jan 85, 9p, EPA-600/D-85-003, PC A02/MF A01

Abstract: Environmental problems caused by atmospheric aerosols are well documented in the specialized literature. Studies reporting on the role of dense clouds of soil particles in past mass extinctions of life on Earth and, more recently (Turco et al., 1983), on calculations of potential global effects of dust and aerosol clouds (generated in a nuclear war) have received the attention of the public through oral and written reports by the news media. Because of the importance of particulate elemental carbon (PEC) to climatic impact, a study was conducted on the size distribution of PEC in samples collected: (i) in an urban area, (ii) inside the air duct of an urban tunnel, and (iii) next to the take-off runway of a busy airport. Besides providing needed data to improve the precision of calculations of potential local and global environmental effects, the PEC size distributions reported in this study help the reader understand the mechanism of association of PEC and polycyclic aromatic hydrocarbons (PAHs), a class or organic compounds that includes several mutagens.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING
7440-44-0	CARBON

PB85-153542/XAB
Receptor Modeling for Carbonaceous Aerosols: Source Characterization
EPA, Research Triangle Park, NC, ASRL
California Univ., Los Angeles
S.V.Hering, et al.
Jan 85, 8p, EPA-600/D-85-004, PC A02/MF A01

Abstract: Two types of sources, freeway vehicles and a commercial airport, were sampled with the objective of determining source profiles suitable for receptor modeling of carbonaceous aerosols. A threefold approach is used: (1) measurement of polycyclic aromatic hydrocarbons (PAH) concentrations; (2) bulk characterization of the carbon component by thermal analysis; and (3) determination of elemental composition by X-ray fluorescence. Additionally, the relative stability of the polycyclic aromatic hydrocarbons upon exposure to filtered urban air was evaluated. Data were collected at a receptor site, which by virtue of its location is expected to be impacted by these two source types.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
45	TRANSPORTATION BY AIR
458	AIR TRANSPORTATION SERVICES
4582	AIRPORTS AND FLYING FIELDS
4583	AIRPORT TERMINAL SERVICES

PB85-153559/REB
Capital and O and M Cost Relationships for Hazardous Waste Incineration: Addendum No. 1 - Ionizing Wet Scrubber Costs
EPA, Cincinnati, OH, HWERL
Acurex Corp.
R. McCormick, H. Lips
Jan 85, 21p, EPA-600/2-85-004, PC A02/MF A01

Abstract: This report addresses certain cost aspects of hazardous waste incineration; specifically capital and operating costs for ionizing wet scrubbers (IWS). It is an addendum to a more comprehensive report 'Capital and O&M Cost Relationships for Hazardous Waste Incineration,' which developed parametric methods for estimating capital and annual costs for incinerators as a function of waste characteristics and quantities, facility capacity, type and location. The earlier study assumed that particulate/HCl emissions were controlled using a venturi scrubber/packed bed absorber system. This study includes an IWS system as a design alternative.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-153906/REB
Review of National Emission Standards for Mercury
EPA, Research Triangle Park, NC, OAQPS
Dec 84, 72p, EPA-450/3-84-014, PC A04/MF A01

Abstract: This report presents the findings of the 5-year review of the national emission standards for mercury. Industries subject to the existing standard are mercury-cell chlor-alkali plants, sludge drying and incineration plants, and mercury ore processing facilities. Information and estimates are presented concerning processes, mercury emissions, control technology, compliance status, and industry growth. Information is presented about other industry source categories which have mercury air emissions, but are not regulated by the standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

PB85-155927/XAB
Survey of Ethylene Dichloride Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Dec 84, 153p, EPA-450/3-84-018, PC A08/MF A01

Abstract: The potential health impact of nationwide ethylene dichloride emissions is being investigated. Thi, document contains information on the sources of ethylene dichloride emissions, current emissions levels, control methods that could be used to reduce ethylene dichloride emissions, and cost estimates for employing controls.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2833	MEDICINALS AND BOTANICALS
2834	PHARMACEUTICAL PREPARATIONS
80	HEALTH SERVICES
806	HOSPITALS

PB85-156180/REB
Evaluation of At-Sea Disposal of FGC (Flue Gas Cleaning) Wastes. Volume 1: Biological Testing and Studies with Untreated Wastes
EPA, Research Triangle Park, NC, AEERL
Arthur D. Little, Inc.
C.B. Cooper, et al.
Dec 84, 166p, EPA-600/7-85-001A, PC A08/MF A01

Abstract: This two-part report is the third of a series on a continuing EPA research program on the feasibility of disposing of flue gas cleaning (FGC) wastes in the ocean. Part 1 gives results of laboratory-scale chemical and biological experiments with untreated (unstabilized) FGC wastes designed to provide basic data on environmental impact potential. Part 2 gives results of further chemical and biological tests with a forced-oxidation (sulfate-rich) FGC waste and with stabilized FGC wastes. Results of tests performed to date and related assessment efforts indicate that the conventional (concentrated-dump) at-sea disposal of unstabilized FGC wastes with soil-like properties on the Continental Shelf appears to be environmentally undesirable, unless contradicted by further work. Test results also indicate that at-sea dispersed disposal of sulfate-rich (and, possibly, sulfite-rich) soil-like FGC wastes is sufficiently promising to merit further research. Likewise, results of this and other programs indicate that conventional or concentrated disposal of brick-like stabilized FGC wastes is also promising.

CL-SULFATE SULFATES
CL-SULFITE CL-SULFITE
EPA ENVIRONMENTAL PROTECTION AGENCY
TM TECHNICAL MONITORING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-156198/REB
Evaluation of At-Sea Disposal of FGC (Flue Gas Cleaning) Wastes. Volume 2: Biological Testing and Studies with Stabilized Wastes
EPA, Research Triangle Park, NC, AEERL
Arthur D. Little, Inc.
C.B. Cooper, I. Bodek, and C.J. Santhanam
Dec 84, 90p, EPA-600/7-85-001B, PC A05/MF A01

Abstract: This two-part report is the third of a series on a continuing EPA research program on the feasibility of disposing of flue gas cleaning (FGC) wastes in the ocean. Part 1 gives results of laboratory-scale chemical and biological experiments with untreated (unstabilized) FGC wastes designed to provide basic data on environmental impact potential. Part 2 gives results of further chemical and biological tests with a forced-oxidation (sulfate-rich) FGC waste and with stabilized FGC wastes. Results of tests performed to date and related assessment efforts indicate that the conventional (concentrated-dump) at-sea disposal of unstabilized FGC wastes with soil-like properties on the Continental Shelf appears to be environmentally undesirable, unless contradicted by further work. Test results also indicate that at-sea dispersed disposal of sulfate-rich (and, possibly, sulfite-rich) soil-like FGC wastes is sufficiently promising to merit further research. Likewise, results of this and other programs indicate that conventional or concentrated disposal of brick-like stabilized FGC wastes is also promising.

CL-METAL METALLIC COMPOUNDS
CL-SULFATE SULFATES
CL-SULFITE CL-SULFITE
EPA ENVIRONMENTAL PROTECTION AGENCY
TM TECHNICAL MONITORING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-157444/REB
Issues in Monitoring Population Exposures
EPA, Research Triangle Park, NC, HERL
Texas Univ., Galveston, TX
J.B. Ward
Jan 85, 45p, EPA-600/D-85-008, PC A03/MF A01

Abstract: This manuscript explores the risks associated with expo-sur to carcinogenic chemicals that have become a growing source of public concern. Steadily increasing numbers of agents are being identified as mutagens and carcinogens. Furthermore, we are in-creasingly aware of sources of exposure to such agents both in the occupational setting and general environment. There is a growing need for reliable and sensitive methods for detecting human exposure to carcinogenic hazards at the time of their occurrence. By detect-ing hazards early, significant reduction in the risk of adverse health outcome can be achieved by reduction or termination of expo-sure. The monitoring of human populations for genetic damage has the potential to improve our ability to detect health hazards and prevent or reduce the risk of workplace-exposure-related cancer. In the long run this can reduce costs related to illness. It is possible that the costs of exposure control can also be reduced by better estab-lishing the sources of significant exposure and by understanding the human response to exposure. However, its greatest promise is in the protection of human health through the early detection and prevention of disease processes resulting from mutagenic exposure.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB85-161263/REB
Measurements of Polycyclic Aromatic Compounds in the Cylinder of an Operating Diesel Engine
EPA, Research Triangle Park, NC, ASRL
Minnesota, Univ., Minneapolis, MN
D.B. Kittelson, C.J. Du, and R.B. Zweidinger
Jan 85, 16p, EPA-600/D-85-012, PC A02/MF A01

Abstract: A unique system which allows sampling of the entire contents of one of the cylinders of a 5.7-liter V-8 indirect-injection diesel engine has been developed. An explosively actuated cutter ruptures a diaphragm in the combustion chamber and allows the contents of the cylinder to rush out and be subsequently diluted and quenched with cool nitrogen. Particles are collected with a high-volume impactor/filter system. This system has been used to collect a series of particle samples at crankangles ranging from 5 to 40 degrees after top dead center. Particle samples from the exhaust were also obtained. The samples have been extracted to determine the soluble organic fraction. These extracts have been analyzed for five polycyclic aromatic compounds: pyrene, fluoranthene, benz(a)pyrene, benz(k)fluoranthene, and 1-nitropyrene. The results indicate significant removal of the first four between the combustion chamber and exhaust manifold. The 1-nitropyrene behaves differently, however, with higher concentrations in the exhaust samples than in the cylinder samples. This suggests that 1-nitropyrene is formed during the expansion stroke and/or in the exhaust manifold.

CL-DIESEL	DIESEL
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
129-00-0	PYRENE
206-44-0	FLUORANTHENE
207-08-9	BENZO (K) FLUORANTHENE
50-32-8	BENZO(A)PYRENE
5522-43-0	NITROPYRENE,1-

PB85-164002/REB
Vinyl Chloride: Relief Valve Standards
EPA, Research Triangle Park, NC, OAQPS
Jan 85, 88p, EPA-450/3-85-002, PC A05/MF A01

Abstract: This document presents information on relief valve discharge performance by industries subject to the vinyl chloride (VC) NESHAP regulations. Information on relief valve discharge performance was collected as part of the review of the technological basis and administrative aspects of the current VC standard. The report includes relief valve discharge performance data for the entire compliance period following promulgation of the VC standard (i.e., 1978-1983). The information presented was based on Regional compliance reports, industry survey and plant visit.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
75-01-4	VINYL CHLORIDE

PB85-165751/REB
Radionuclides: Background Information Document for Final Rules. Volume 1
EPA, Washington, D.C., ORP
PEI Assoc., Inc., Battelle Columbus Labs, and Kilkelly Environmental Assoc., Inc.
Oct 84, 282p, EPA-520/1-84-022-1, PC A13/MF A01

Abstract: On October 31, 1984, EPA published a notice in the Federal Register withdrawing proposed standards for radionuclide emissions from four sources: (1) DOE facilities, (2) NRC-licensed facilities and non-DOE Federal facilities, (3) underground uranium mines, and (4) elemental phosphorus plants. This Background Information Document supports the Agency's final actions on radionuclides. Volume I is an integrated risk assessment. It addresses historical and current regulatory programs and strategies, hazard identifications (health effects), radionuclide emissions, reduction of dose and risk, movement of radionuclides through environmental pathways, radiation dosimetry, and estimating the risk of health effects resulting from radionuclide air emissions. Volume II examines the source categories and presents the following information for each category: a general description of the source category, a brief description of the processes that led to the emissions of radionuclides into air, a summary of emissions data, and estimates of the radiation doses and health risks to both individuals and populations.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-165769/REB
Radionuclides: Background Information Document for Final Rules. Volume 2
EPA, Washington, D.C., ORP
PEI Assoc., Inc., Battelle Columbus Labs, and Kilkelly Environmental Assoc., Inc.
Oct 84, 441p, EPA-520/1-84-002-2, PC A19/MF A01

Abstract: This report serves as a background information document in support of the Environmental Protection Agency's final rules for sources of emissions of radionuclides pursuant to Section 112 of the Clean Air Act. This report presents an analysis of the public health impact caused by radionuclides emitted into the air from facilities that are the subject of this rulemaking. These facilities are examined as six major source categories: (1) Department of Energy (DOE) facilities, (2) Nuclear Regulatory Commission licensed facilities and non-DOE Federal facilities, (3) coal-fired utility and industrial boilers, (4) uranium mines, (5) phosphate industry facilities, and (6) mineral extraction industry facilities. For each source category, the authors present the following information: (1) a general description of the source category, (2) a brief description of the processes that lead to the emissions of radionuclides into air, (3) a summary of emissions data, and (4) estimates of the radiation doses and health risks to both individuals and populations.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-167906/REB
Methodology for Ranking the Degree of Hazard Associated with Exposure to Carcinogens and Other Toxic Chemicals
EPA, Washington, D.C., OHEA
E.L. Anderson, et al.
Feb 85, 57p, EPA-600/D-85-040, PC A04/MF A01

Abstract: A hazard index is an overall indicator of the potential harm of a hazardous substance to humans and the environment. This paper describes the use of a carcinogenicity index and a systemic (chronic) toxicity index in setting reportable quantities under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. The three types of evidence used to evaluate a substance's carcinogenic hazard are: (1) epidemiological, (2) experimental, and (3) supportive evidence from short-term tests, metabolism and pharmacokinetics and structure-activity correlations. Hazardous substances suspected of carcinogenic potential are ranked by the level of this evidence and the potency factor. The potency factor is /ED(sub 10), where ED(sub 10) is the estimated dose associated with a lifetime cancer risk of 10%. The toxicity index for substances with systemic (chronic) toxicity potential is based on the minimum effective dose levels for chronic exposures via environmental media and the type of effect. About 200 potential carcinogens and 200 chemicals associated with other diseases have been evaluated and assigned a hazard ranking.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

PB85-168433/XAB
Health Assessment Document for Beryllium. Review Draft
EPA, Research Triangle Park, NC, ECAO
R. Elias, et al.
Dec 84, 179p, EPA-600/8-84-026A, PC A09/MF A01

Abstract: The properties of beryllium resemble those of aluminum, zinc, and magnesium. The main routes of beryllium intake are inhalation and ingestion. The chemical properties of beryllium are such that transformation of soluble to insoluble forms of inhaled beryllium results in long retention time in the lungs. Absorbed beryllium is deposited mainly in the skeleton, where the biological half-time is fairly long. The lung is the critical organ of both acute and chronic noncarcinogenic effects. However, the lung effects caused by chronic exposure may be combined with systemic effects. Certain beryllium compounds have been shown to be carcinogenic in various experimental animals under differing routes of exposure. Epidemiologic studies present equivocal conclusions on the carcinogenicity of beryllium and beryllium compounds. A lifetime cancer risk for continuous inhalation exposure at 1 micrograms beryllium/cu m has been estimated.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7440-41-7	BERYLLIUM

PB85-168771/REB
Characterization of Hazardous Waste Sites, a Methods Manual. Volume 2: Available Sampling Methods (Second Edition)
EPA, Las Vegas, NV, EMSL
Lockheed Engineering and Management Services, Co., Inc.
P.J. Ford, P.J. Turina, and D.E. Seely
Dec 84, 303p, EPA-600/4-84-076, PC A14/MF A01

Abstract: Investigations at hazardous waste sites and sites of chemical spills often require on-site measurements and sampling activities to assess the type and extent of contamination. This document is a compilation of sampling methods and materials suitable to address most needs that arise during routine waste site and hazardous spill investigations. The sampling methods presented in this document are compiled by media, and were selected on the basis of practicality, economics, representativeness, compatability with analytical considerations, and safety, as well as other criteria. In addition to sampling procedures, sample handling and shipping, chain-of-custody procedures, instrument certification, equipment fabrication, and equipment decontamination procedures are described. Sampling methods for soil, sludges, sediments, and bulk materials cover the solids medium. Ten methods are detailed for surface waters, groundwater and containerized liquids; twelve are presented for ambient air, soil gases and vapors, and headspace gases. A brief discussion of ionizing radiation survey instruments is also provided.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-169878/REB
Modified Method 5 Train and Source Assessment Sampling System: Operator's Manual
EPA, Research Triangle Park, NC, AEERL
Arthur D. Little, Inc.
L.M. Schlickenrieder, J.W. Adams, and K.E. Thrun
Feb 85, 138p, EPA-600/8-85-003, PC A07/M A01

Abstract: The report is a detailed guide for using two devices to sample stack gas effluents from hazardous waste incinerators. These two devices--the Modified Method 5 (MM5) train and the Source Assessment Sampling System (SASS) train--have been identified as the sampling devices to be used in assessing the Destruction and Removal Efficiency (DRE) of Principal Organic Hazardous Compounds (POHCs) by hazardous waste incinerators. Step-by-step procedures for cleaning, assembling, calibrating, using, and recovering samples from each device are detailed. Guidelines for the reduction and presentation of data are included.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB85-170157/REB
Risk Assessment and Management: Framework for Decision Making
EPA, Washington, D.C., OA
Dec 84, 38p, EPA-600/9-85-002, PC A03/MF A01

Abstract: The risk assessment and risk management initiatives described in this report are tools which will help make possible more efficient protection of the environment and human health. There are thousands of chemicals in commerce and an unknown number of contaminants and unintended by-products. Screening by estimates of potential risk reduction is an attractive basis for comparing regulatory priorities. Risk management provides a context for balanced analysis and decision-making. Toxic chemicals are legitimately frightening, but the trouble is that we are exposed to a complex, highly dilute mixture of chemicals, taken in through air, water, and food. The Agency can contribute to rational discussion by exposing the scientific basis for the risk, including the confidence they have in the estimate; placing the risk reduction expected from the regulation in context with other risks and other opportunities for risk reduction; and explaining the values on which the balancing judgements have been made. Some important differences (defined by statute) in the ways the laws manage risk will always remain, but a risk management approach can use their remaining administrative flexibility to make more efficient use of the Agency's and society's resources to reduce risk and make the Agency's actions more consistent.

EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT
RDG REG DEVELOPMNT GUIDE

PB85-172567/REB
Sampling of Automobile Interiors for Organic Emissions
EPA, Research Triangle Park, NC, ASRL
D. Dropkin
Feb 85, 29p, EPA-600/3-85-008, PC A03/MF A01

Abstract: A study was undertaken to determine the concentrations of N-nitrosamines (specifically N-nitrosodimethylamine and N-nitrosomorpholine), hydrogen cyanide and other volatile organic compounds emitted from the interiors of new cars. The three cars tested were placed in an enclosed shed and heated with infrared tungsten lamps to simulate the temperature rise (heat build-up) in cars were sitting outdoors on a hot sunny day. The air inside the car as well as the air inside the shed was sampled during the entire temperature rise of 'heat build-up' cycle (ambient, ambient to 60C, and 60C). These air samples were pulled through cartridges containing adsorbents such as Thermosorb (specifically to collect for N-nitrosamiens) and Tenax (used to collect volatile organic compounds), as well as pulling the air through impingers and also into Tedlar bags to analyze for hydrogen cyanide. Low concentrations of N-nitrosdimethylamine and N-nitrosomorpholine were measured in the car interiors during the heating process, but higher concentrations of these same N-nitrosamines were measured outside the cars. No hydrogen cyanide was detected inside or outside the two cars tested for this compound. This report covers a period from May, 1980 to February, 1981 and work was completed as of February, 1981.

CL-IAP	INDOOR AIR POLLUTANTS
CL-NAMINE	NITROSAMINES
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS/AM	SOURCE SAMP/AMB MON
59-89-2	N-NITROSOMORPHOLINE
62-75-9	N-NITROSODIMETHYLAMINE
74-90-8	HYDROGEN CYANIDE

PB85-172575/REB
Preliminary Assessment of Costs and Credits for Hazardous Waste Co-Firing in Industrial Boilers
EPA, Cincinnati, OH, HWERL
Acurex Corp.
R. McCormick, and L. Weitzman
Feb 85, 64p, EPA-600/2-85-013, PC A04/MF A01

Abstract: This report provides preliminary information on the costs and credits associated with hazardous waste co-firing in industrial boilers. The main objective is to identify and evaluate the costs/ credits inherent in current hazardous waste co-firing practices, plus the additional costs that may be incurred as a result of more stringent emissions limitations. An overview of current hazardous waste/ industrial boiler co-firing practices is provided. This overview addressed the types of waste now being burned in boilers, the generic designs and capacities of boilers now being co-fired, and the types of air pollution control device (APCD) retrofits that may be required in the advent of air emissions regulations. Parametric cost estimate methods are provided for: (1) waste handling, equipment addition, (2) combustion system retrofit, (3) APCD retrofit, (4) incremental O&M costs, and (5) fuel savings and waste disposal credits. The cost estimating approach accounts for differences in waste characteristics, boiler design, capacity, and waste/fuel co-firing ratio. Finally, cost/credit calculations are presented for two hypothetical waste co-firing scenarios. These calculations illustrate how the information provided in this report can be used; no conclusions concerning the economy of waste co-firing are intended.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-172583/XAB
Receptor Models for Airborne Organic Species
EPA, Research Triangle Park, NC, ASRL
New York Univ. Medical Center
J.M. Daisey, P.J. Lioy, and T.J. Kneip
Feb 85, 205p, EPA-600/3-85-014, PC A10/MF A01

Abstract: A study was performed that: (1) critically reviewed existing source emissions data to determine if variations in the organic composition of such emissions could be used to distinguish sources of airborne particulate matter and particulate organic matter, (2) attempted to develop receptor source apportionment models for three fractions of particulate organic matter and selected polycyclic aromatic hydrocar-bons using an existing set of ambient aerosol measurements made at a site in New York City, and (3) defined critical needs for the development of receptor models for airborne organic matter. The results of this study showed that it is possible to develop receptor source appor-tionment models for particulate organic species using the factor analysis/multiple regression modeling technique. It showed that a lack of adequate organic composition data for source emissions was a critical limitation for model validation and also for development of chemical mass balance receptor source apportionment models. It also showed, however, that existing source emissions data on polycyclic aromatic hydrocarbons and certain other species indicate that such species might be useful in distinguishing emissions from certain types of sources.

CL-ORGANIC ORGANIC COMPOUNDS
CL-PM PARTICULATE MATTER
CL-POM POLYCYCLIC ORGANIC MATTER
EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

PB85-173243/REB
Measurement of Volatile Organic Compound Capture Efficiency
EPA, Cincinnati, OH, HWERL
Radian Corp.
D.B. Hunt and J.L. Randall
Feb 85, 119p, EPA-600/2-85-011, PC A06/MF A01

Abstract: This report reviews the feasibility considerations regarding each of several potential alternate approaches for determining capture efficiency and experimental testing of one approach, the liquid/gas-phase material balance. Two phases of experimental testing were conducted: laboratory and field investigations. The measured mean cature efficiencies for the field test were higher than expected (106.7% with a coefficient of variation 7.4%). At this time, there is no material balance methodology which is superior to the gas-phase approach using a total enclosure around the regulated coating operation.

CL-VOC VOLATILE ORGANIC COMPOUNDS
CT CONTROL TECHNOLOGY
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB85-173771/REB
Textile Dyes and Dyeing Equipment: Classification, Properties and Environmental Aspects
EPA, Research Traingle Park, NC, AEERL
Radian Corp.
S.V. Kulkarni, et al.
Feb 85, 402p, EPA-600/2-85-010, PC A18/MF A01

Abstract: The report gives results of a study of available information on textile dyeing equipment, dyeing procedures, and dye chemis-try, to serve as background data for estimating the properties and evaluating the associated risks of new commercial dyestuffs. It reports proper-ties of dyestuffs which affect their use on a fabric or in a dye machine, placing special emphasis on acid, substantive direct, azoic, disperse, sulfur, and fiber reactive dyes. These six classes were selected, based on projections of new dye development activities and concerns about the health and environmental effects of these dyes. Dyeing equipment and associated dyeing procedures that received detailed coverage were beck, semi-continuous (pad-batch), transfer printing, and direct textile printing. These four types of equipment were chosen because of their projected, continued, and predominant use in the textile dyeing industry. The report estimates the quan-tity of dyestuff released to the environment from each type o dyeing equipment, and classifies the production capacity of textile dyeing operations and their wastewater volumes. The litera-ture searc conducted for this study revealed little or no informa-tion on worker activities, worker exposure to dyes, and specific chemical and physical properties of individual textile dyestuffs.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES

PB85-176790/XAB
Identification and Quantification of Nitropolynuclear Aromatic Hydrocarbons in Ambient and Indoor Air Particulate Samples
EPA, Research Triangle Park, NC
Battelle Columbus Labs
C.C. Chuang, et al.
Mar 85, 21p, EPA-600/D-85-050, PC A02/MF A01

Abstract: Polynuclear aromatic hydrocarbons (PAH) and nitro-substituted poly-nuclear aromatic hydrocarbons (N2-PAH) have bee identified in organic extracts of ambient air particulate matter. Since many of the identified PAH and NO2-PAH are potent carcinogens and/or mutagens, determination of their presence in ambient air is of considerable importance. A study was conducted to estimate the influence of PAH and NO2-PAH concentration in residues as a result of: (1) smoking, (2) wood burning fireplaces, (3) home utilities, and (4) ambient air intrusion. Eight study homes and two background homes located in Columbus, OH were sampled in March 1984. Samples were taken for 24 hours by using a modified EPA/SURC medium volume sam-pler This presentation will emphasize the analytical methods and the results of the NO2-PAH determinations from both ambient and indoor air samples. The identi-fication and quantification of NO2-PAH were accomplished using an on-column injection, negative chemical ionization gas chromatography/ mass spectrometry (NCI GC/MS) technique, in the multiple ion detec-tion mode (MID). A statistical analysis of these data was conducted to evaluate the test paramater effects on NO2-PAH levels.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING

PB85-178549/XAB
Current Intelligence Bulletin 43: Monohalomethanes (Methyl Chloride CH3Cl, Methyl Bromide CH3Br, Methyl Iodide CH3I)
National Institute of Occupational Safety and Health
Sep 84, 27p, PC A03/MF A01
NIOSH PUB No. 84-117, AVAIL NIOSH

Abstract: The monohalomethanes (methyl chloride, methyl bromide, and methyl iodide) are alkylating agents and thus have generated concern as to their potential for inducing mutations and cancer. All three compounds were found to be direct-acting mutagens in the Ames assay. In experimental studies in either rats or mice using various routes of administration, these three compounds have also demonstrated the ability to produce cancer. Methyl chloride produced a teratogenic effect (heart defects) in the offspring of pregnant mice exposed by inhalation at 500 to 750 ppm. Based on this data, the National Institute for Occupational Safety and Health (NIOSH) recommends that methyl chloride, methyl bromide, and methyl iodide be considered as potential occupational carcinogens and that methyl chloride be considered a potential occupational teratogen.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
74-83-9	METHYL BROMIDE
74-87-3	METHYL CHLORIDE
74-88-4	IODOMETHANE

PB85-178721/XAB
Current Intelligence Bulletin 42: Cadmium (Cd)
National Institute of Occupational Safety and Health
Sep 84, 16p, PC A01/MF A01
NIOSH PUB No. 84-116, UNAVAIL NIOSH

Abstract: The purpose of this bulletin is to disseminate recent information concerning the potential carcinogenic hazard to workers of cadmium (Cd). In 1976, NIOSH published Criteria for a Recommended Standard...Occupational Exposure to Cadmium, recommending a permissible exposure limit of 40 micrograms of cadmium per cubic meter of air (40 micrograms/cu m) which was viewed as necessary to prevent chronic renal damage in exposed workers. Epidemiological and toxicological data suggesting an association between cadmium exposure and cancer were cited in that document, but the evidence for carcinogenicity was considered to be inconclusive at that time. Based on subsequent epidemiological and toxicological studies, NIOSH now recommends that cadmium and its compounds be regarded as potential occupational carcinogens.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
7440-43-9	CADMIUM

PB85-181139/REB
Review of New Source Performance Standards for Ammonium Sulfate Manufacture
EPA, Research Triangle Park, NC, OAQPS
Feb 85, 58p, EPA-450/3-85-004, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMAN
105-60-2 CAPROLACTAM
28 CHEMICALS AND ALLIED PRODUCTS
281 INDUSTRIAL INORGANIC CHEMICALS
7783-20-2 AMMONIUM SULFATE

PB85-181865/REB
Analysis of Aldehydes and Ketones in the Gas Phase
EPA, Research Triangle Park, NC, ASRL
Union Coll., Schenectady, NY
L.A. Hull
Apr 85, 73p, EPA-600/3-85-021, PC A04, MF A01

Abstract: The development and testing of a 2,4-dinitrophenylhydrazine--acetonitrile (DNPH-ACN) method for the analysis of aldehydes and ketones in ambient air are described. A discussion of interferences, preparation of calibration standards, analytical testing, fluor-escence methods and cartridge sampling are discussed. The results of atmospheric sampling in an urban area and atmospheric and cloudwater sampling in a rural area are included.

CL-ALDEHYDE ALDEHYDES
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB85-183085/REB
Exposure Assessment for Asbestos - Contaminated Vermiculite
EPA, Washington, DC, OTS
Versar, Inc.
G.H. Dixon, et al.
Feb 85, 110p, EPA-560/5-85-013, PC A06/MF A01

Abstract: This document is an exposure assessment for asbestos-contaminated vermiculite. Such exposure is found to occur mainly via inhalation; ingestion and dermal adsorption are insignificant routes of exposure. Vermiculite is released to the air during mining, milling, exfoliation, transport, and use. These operations may also release some asbestos fibers, which are readily transported through the atmosphere.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-21-4	ASBESTOS
14	NONMETALLIC MINERALS, EXCEPT FUELS
149	MISCELLANEOUS NONMETALLIC MINERALS
1499	NONMETALLIC MINERALS, NEC
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3295	MINERALS, GROUND OR TREATED

PB85-188837/REB
Assessment of PCDDs (Polychlorinated Dibenzodioxins) and PCDFs (Polychlorinated Dibenzofurans) from PCB (Polychlorinated Biphenyls) Transformer and Capacitor Fires
EPA, Cincinnati, OH, HWERL
Technical Resources, Inc.
A. Lee
Apr 85, 130p, EPA-600/2-85-036, PC A07/MF A01

Abstract: The EPA has been mandated to develop regulations to control exposure to polychlorinated biphenyls (PCBs). In light of this responsibility the EPA Office of Toxic Substances recently issued an Advance Notice of Proposed Rulemaking (ANPR) to define the problem of releases of PCBs and other toxic compounds during fires involving transformers and capacitors containing PCBs. The EPA Office of Research and Development (ORD) has also been mandated under the recently released Dioxin Strategy document to evaluate fire accidents involving PCB transformers and capacitors as potential new sources of polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) in the environment. To develop the information for the two mandated programs, the EPA/ORD undertook this study to assess the problems associated with fires involving aska-rels, to catalog the contamination experiences and to review poten-tial decontamination methods as well as disposal of contaminated material. This study assesses the chemistry of PCBs under thermal conditions, evaluates the generation of PCDDs and PCDFs, reviews technologies for destruction and disposal of PCBs and their toxic contaminants. Methdologies to assess potential hazards and reduce exposure are also discussed.

CL-DIOXIN	DIOXIN
CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
53469-21-9	POLYCHLORINATED BIPHENYLS

PB85-188860/REB
Stability of Parts-per-Billion Hazardous Organic Cylinder Gases and Performance Audit Results of Source Test and Ambient Air Measurement Systems. Status Report 1
EPA, Research Triangle Park, NC, EMSL
Research Triangle Institute
R.K. Jayanty, et al.
Apr 85, 83p, EPA-600/4-85-032, PC A05/MF A01

Abstract: A repository of 14 gaseous organic compounds at parts-per-billion (ppb) levels in compressed gas cylinders has been established by the U.S. Environmental Protection Agency. The primary objectives of this on-going project are: (1) to provide accurate gas mixtures to EPA, state/local agencies, or their contrac-tors for performance audits to assess the relative accuracy of source measurement systems during hazardous waste trial burn tests and ambient air monitoring programs, (2) to verify the manufacturer's certified analysis of the multi-component gas mixtures, (3) to determine the stability of the gas mixtures with time, and (4) to develop new audit materials as requested by EPA. The repository consists of two mixtures of five and nine organic compounds in aluminum cylinders in a balance gas of nitrogen. The five component mixture contains carbon tetrachloride, chloroform, per-chloroethylene, vinyl chloride and benzene. The nine component mixture includes trichloroethylene, 1,2-dichloroethane, 1,2-dibromethane, acetoni-trile, trichlorofluoromethane, dichloro-difluoromethane, bromomethane, methyl ethyl ketone and 1,1,1-tri-chloroethane. Results of 12 of 20 performance audits, and a description of the experimental procedures used for analyses and available stability data, are presented in this report.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
TM	TECHNICAL MONITORING

PB85-188878/REB
Environmental Release of Asbestos from Commercial Product Shaping
EPA; Cincinnati, OH, WERL
Engineering-Science, Inc.
D.A. Falgout
Apr 85, 396p, EPA-600/2-85-044, PC A17/M A01

Abstract: For the first time, the release of respirable asbestos fibers has been quantified in terms of standard mechanical forces using widely accepted methodology and specified QA/QC procedures. Both fabrication of new products from asbestos containing materials and repair or removal of in-use asbestos containing products contribute to the total environmental exposure to asbestos. There is a need to assess these materials and operations according to the potential severity of their fiber releases. This research consisted of performing several simulated industrial/commercial shaping operations on several asbestos containing products. The rates of fiber release, expressed as fibers per cubic centimeter of air inside an enclosed test chamber per gram of asbestos milled, were measured. The filter samples were analyzed by the transmission electron microscope (TEM) method. Lengths, widths, and type of asbestos were reported for fibers and other asbestos structures. In addition, samples were taken for phase contrast microscopic (PCM) analysis during most of the experiments. The results of these analyses are compared. Research on the release of asbestos/substitutes resulting from commercial product manufacture, use, and disposal is of continuing importance.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-21-4	ASBESTOS
26	PAPER AND ALLIED PRODUCTS
266	BUILDING PAPER AND BOARD MILLS
2661	BUILDING PAPER AND BOARD MILLS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS

PB85-188886/XAB
Analytical and Sampling Methodology for Characterization of Polynuclear Aromatic Compounds in Indoor Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs, OH
N.K. Wilson, et al.
1985, 20p, EPA-600/D-85-069, PC A02/MF A01

Abstract: Sampling and analysis methodology were developed for the collection and quantification of polynuclear aromatic hydrocarbons, their nitro derivatives, and their nitrogen heterocyclic analogs in indoor air. The methodology was evaluated in a study of air in ten homes. The study included homes with and without woodburning fireplaces, gas heat and appliances, and smoking occupants, and with a range of ventilation rates. The range of concentrations in the homes and factors that systematically contribute to those concentrations of selected polynuclear aromatic compounds were estimated. Some practical limitations on the sampling equipment and methodology were identified.

CL-IAP	INDOOR AIR POLLUTANTS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB85-189066/REB
Evaluation of Hazardous Waste Incineration in an Aggregate Kiln: Florida Solite Corporation
EPA, Cincinnati, OH, HWERL
Monsanto Research Corp.
D.R. Day, L.A. Cox, J.A. Peters
Apr 85, 112p, EPA-600/2-85-030, PC A06/MF A01

Abstract: Aggregate kiln incineration of chlorinated liquid organic waste was investigated in a one-week program at Florida Solite Company. POHCs (toluene, tetrachloroethylene, methyl ethyl ketone, and methyl isobutyl ketone) were monitored in waste and stack emissions. In addition, stack emissions were monitored for particulate matter, particulate trace metals, HCl, SO2 and NOx. Process samples were collected and analyzed for trace metals and chloride. The destruction and removal efficiency of POHCs and the fate of trace metals and chloride ion in the kiln process were determined.

CL-HAZWAST	HAZARDOUS WASTES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING
10102-44-0	NITROGEN DIOXIDE
108-05-4	VINYL ACETATE
108-10-1	METHYLPENTANONE,4-,2-
108-88-3	TOLUENE
127-18-4	TETRACHLOROETHYLENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7446-09-5	SULFUR DIOXIDE
7647-01-0	HYDROGEN CHLORIDE
78-93-3	BUTANONE,2-

PB85-191138/REB
Sources of Copper Air Emissions
EPA, Research Triangle Park, NC, AEERL
Engineering-Science, Inc.
G.E. Weant
Apr 85, 91p, EPA-600/2-85-046, PC A05/MF A01

Abstract: The report gives results of a study to update estimates of atmospheric emissions of copper and copper compounds in the U.S. Source categories evaluated included: metallic minerals, primary copper smelter, iron and steel making, combustion, municipal incineration, secondary copper smelter, copper compound production, iron foundries, primary lead smelters, primary zinc smelters, ferroalloy production, brass/bronze production, and carbon black production. The study relied on data in published literature, supplemented by EPA test reports and data bases. The approach used to assess each source category involved: (1) estimating total particulate emissions, including fugitives; (2) determining the effect of air pollution control on emissions; (3) estimating the proportion of copper contained in the total particulates; and (4) estimating copper emissions. Copper emissions estimated are presented for each source category.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
10	METAL MINING
102	COPPER ORES
1021	COPPER ORES
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3351	COPPER ROLLING AND DRAWING
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
7440-50-8	COPPER

PB85-191187/REB
Parametric Evaluation of VOC/HAP (Volatile Organic Compounds-Hazardous/Toxic Air Pollutants) Destruction via Catalytic Incineration
EPA, Washington, DC, AEERL
Radian Corp.
M.A. Palazzolo, et al.
Apr 85, 316p, EPA-600/2-85-041, PC A14/MF A01

Abstract: The report describes the use of a pilot-scale catalytic incineration unit/solvent generation system to investigate the effectiveness of catalytic incineration as a way to destroy volatile organic compounds (VOCs) and hazardous/toxic air pollutants (HAPs). Objectives of the study were to: (1) investigate the effects of operating and design variables on the destruction efficiency of VOC/HAP mixtures, and (2) evaluate destruction efficiencies for specific compounds in different chemical classes. Study results verified that the following factors affect catalyst performance: inlet temperature, space velocity, catalyst geometry, compound type, compound inlet concentration, and mixture composition. Tests showed that destruction efficiencies exceeding 98 percent were possible (given sufficiently high inlet temperature/low space velocities) for the following compounds/compound classes: alcohols, acetates, ketones, cellosolves/dioxane, aldehydes, aromatics, and ethylene/ethylene oxide. Destruction efficiencies of at least 97 percent were achieved for acrylonitrile and cresol. Chlorinated hydrocarbons were not effectively destroyed with the type of catalyst used in this study.

CL-ALDEHYD	ALDEHYDES
CL-HAZWAST	HAZARDOUS WASTES
CL-SOLVENT	SOLVENTS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE
1319-77-3	CRESOL (ALL ISOMERS)
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
74-85-1	ETHYLENE
75-21-8	ETHYLENE OXIDE

PB85-191559/XAB
Health Assessment Document for Dichloromethane (Methylene Chloride)
EPA, Research Triangle Park, NC, ECAO
Bowman Gray School of Medicine, Winston-Salem, NC
S. Bayard, et al.
Feb 85, 250p, EPA-600/8-82-004F, PC A11/MF A01

Abstract: Dichloromethane is used extensively in commercial and industrial solvent applications. The background atmospheric concentration is about 35 ppt. In surface water and drinking water, measured concentrations generally have been in the low parts per billion range. Available data suggest that DCM is biodegradable and has low aquatic toxicity to aquatic organisms. The weight of evidence from the avilable literature indicates that adverse toxicologic (non-genotoxic) effects in humans are unlikely to occur at ambient air or water levels found or expected in the general environment. Available evidence suggests that the teratogenic potential of DCM for humans is minimal. The weight of evidence with respect to mutagenic potential shows that DCM is capable of causing gene mutations and has the potential to cause such effects in exposed human cells. With regard to cancer, the weight of evidence from experimental animal studies is limited. When the absence of epidemiological evidence is considered with the limited animal evidence, the overall evaluation of DCM using the criteria of the International Agency for Research on Cancer is a Group 3 chemical in that it cannot be classified as to its carcinogenic potential for humans.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-09-2	METHYLENE CHLORIDE

PB85-192219/REB
Rapid Assessment of Exposure to Particulate Emissions from Surface Contamination Sites
EPA, Washington, DC, OHEA
Midwest Research Institute
C. Cowherd, et al.
Feb 85, 159p, EPA-600/8-85-002, PC A08

Abstract: Emergency response actions at chemical spills and abandoned hazardous waste sites often require rapid assessment of (a) the potential for atmospheric contamination by the chemical or waste compound and (b) the inhalation exposure of people living in the vicinity of a surface contamination site. This manual provides a methodology for rapid assessment of inhalation exposure to respirable particulate emissions from surface contamination sites. Respirable particulate matter is defined as airborne particles equal to or smaller than 10 micrometers aerodynamic diameter. The methodology consists of a site survey procedure, particulate emission factor equations for wind and mechanical entrainment processes, procedures for mapping atmospheric contaminant concentration distributions by scaling the output of pre-solved computer models of regional atmospheric dispersion, and an equation for calculation of inhalation exposure. In addition to the components of the methodology, this manual discusses critical contaminant and site characteristics, describes assumptions and limitations of the procedures, and presents example applications.

CL-PM	PARTICULATE MATTER
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-192847/REB
Innovative Thermal Hazardous Waste Treatment Processes
EPA, Cincinnati, OH, HWERL
H.M. Freeman
Apr 85, 135p, EPA-600/2-85-049, PC A07/MF A01

Abstract: This report contains discussions of 21 thermal processes identified by the U.S. Environmental Protection Agency (U.S. EPA) as innovative processes for treating or destroying hazardous organic wastes. The subject processes were identified through two national solicitations for innovative processes and several extensive literature surveys. Information about the subject processes was provided voluntarily by the process developers. The criteria used for selection of a process for the report included the innovativeness of the process when compared with conventional existing processes and the potential contribution the process could make to the evolving field of hazardous waste management technology.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-196418/REB
Evaluation of Passive Sampling Devices (PSDs)
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
R.W. Coutant
Apr 85, 74p, EPA-600/4-85-034, PC A04/MF A01

Abstract: The basic objectives of this study were to evaluate the performance of the EPA passive sampling device (PSD) for sampling of ambient level volatile organic compounds (VOC's); to develop an understanding of the mechanics of passive sampling using reversible adsorption; and to apply this understanding to development of an improved PSD that is usable for sampling of VOC's over periods of 8 to 24 hours. Laboratory and limited field evaluations of the standard and modified PSD's were conducted and a model relating sorbent properties and device design to sampling rates was developed. The results show the standard PSD's to be useful for sampling of VOC's having large retention volumes. Modified PSD's having greatly reduced sampling rates show promise for sampling compounds having retention volumes as low as 5 to 10 L/g over 8 to 24 hours sampling periods. The use of Spherocarb as an alternative sorbent to Tenax GC also was investigated as a means for improving the performance of the PSD. This sorbent was found to be unsuitable because of the high temperatures required for desorption. It is recommended that the model which was developed be used for developing sampling plans for specific applications, and that more extensive field evaluation of the reduced-rate PSD's be conducted.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB85-197820/REB
Literature Review and Survey of Emissions from Residential Wood Combustion and Their Impact
EPA, Research Triangle Park, NC, AEERL
Radian Corp.
M.W. Hartman, G.D. Rives
Apr 85, 108p, EPA-600/2-85-047, PC A06/MF A01

Abstract: The report gives results of a literature search of 53 reports covering woodstove design, operating conditions, emissions, testing methods, and ambient air impacts. The woodstoves studied, both controlled (catalytic) and uncontrolled, varied in design from simple to complex. The primary considerations in operating conditions were that the stoves burned primarily cord wood. Test results were segregated by the type of wood utilized, the percent moisture in the tested wood, the burn rate of the wood, the stage of burning that was tested, and the length of the test. In addition to the operating conditions, the emissions were qualified by the test method that was performed, the firebox temperature, and the stack temperature. Emission parameters studied included particulate matter (PM), carbon monoxide, nitrogen oxides, hydrocarbons (HC), and polycyclic organic material, especially benzo-a-pyrene. This report includes ambient air impact surveys at various locations in the U.S. Most ambient studies were concerned with the PM and HC impacts, but a few looked at relating these impacts back to their sources.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
50-32-8	BENZO(A)PYRENE
630-08-0	CARBON MONOXIDE

PB85-203792/REB
Evaluation of Air Emissions from Hazardous Waste Treatment, Storage, and Disposal Facilities
EPA, Cincinnati, OH, HWERL
Radian Corp.
W.D. Balfour, R.G. Wetherold, D.L. Lewis
May 85, 81p, EPA-600/2-85-057, PC A05/MF A01

Abstract: This study has examined the fugitive air emissions from landfills, surface impoundments, storage tanks, containers (drums), solvent recovery processes, and land treatment technologies at hazardous waste disposal facilities (HWDF's). The main objective of this study was to develop and demonstrate techniques for determining air emissions from the above HWDF technologies (sources). Various predictive models for estimating air emissions exist for some of these sources. These models have been identified and evaluated for applicability to select HWDF's. Sampling approaches have been identified for Procedures for the collection and qualitative and quantitative analysis of the air samples and the liquid and solid samples taken in conjunction with the air samples have also been developed. The resulting analytical data have provided general information on the level of air emissions from the sources studied. This document summarizes the findings from each of four HWDF's tested, comparing and contrasting the measured and predicted emission results and the experiences gained in using the various sampling approaches.

CL-HAZWAST	HAZARDOUS WASTES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-205144/REB
Second Review of Standards of Performance for Sewage Sludge Incinerators
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 139p, EPA-450/3-84-010, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-205516/REB
Sources of Ethylene Oxide Emissions
EPA, Research Triangle Park, NC, OAQPS
D.W. Markwordt
Apr 85, 86p, EPA-450/3-85-014, PC A05/MF A01

Abstract: The objective of this report is to present the results of a preliminary source assessment study conducted for ethylene oxide in which emission, cost, and dispersion data were developed that will aid in evaluating the need for further regulatory development for ethylene oxide.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
75-21-8	ETHYLENE OXIDE

PB85-207462/REB
Teratogenic Effects of Microwave Radiation
EPA, Research Triangle Park, NC, HERL
Tulsa University, OK
M.E. O'Connor, R. Strattan
May 85, 43p, EPA-600/1-85-007, PC A03/MF A01

Abstract: Pregnant CF-1 mice were exposed to 2450-MHz CW microwave irradiation at power densities of 0, 10, or 30 mW/sq. cm for 6 hours daily from gestational day 1 through day 18. All exposures occurred in an anechoic chamber maintained at 50% relative humidity with air temperature of 22C. A group of pregnant colony cage-controlled mice was maintained for each of the three exposure groups. Teratogenic examinations were performed on day 18 following caesarean section of the maternal subject. Every third fetus was stained with alazarin red and examined for skeletal abnormalities. No significant differences between the groups were observed for fetal body mass, fetal brain mass, resorption, live fetuses, gross abnormalities, or skeletal abnormalities.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
36	ELECTRIC AND ELECTRONIC EQUIPMENT
363	HOUSEHOLD APPLIANCES
3631	HOUSEHOLD COOKING EQUIPMENT

PB85-207876/REB
Impact of Suspect Hazard Designation on Chemical Use and Activity: A Pilot Study
EPA, Washington, DC, OPTS
Heiden Associates, Inc.
E.V. Heiden, M.E. Eads
May 85, 285p, EPA-560/4-85-003, PC A13/MF A01

Abstract: How chemical firms regulated by EPA respond when their products are designated as suspect toxic hazards (as distinguished from being formally regulated) was the subject of a pilot study to: (1) determine the types of public data and methodological approaches available to study the problem; and (2) assess and measure actual impact based on (1). Ten chemicals were selected for initial study, based on: (1) their presence on NIOSH and EPA or OSHA lists of potential carcinogenic substances; (2) availability of sufficient public data for analysis (3) reasonable diversity and representativeness. A total of 28 categories of production or use were studied for these ten chemicals. They were supplemented by eight uses for three additional chemicals in some of the analyses conducted. Economic case history studies and formal econometric statistical models were the investigation tools used. It was concluded that although important data gaps and limitations in economic methodology existed in this pilot study, sufficient public data were available for a number of chemicals to conduct a meaningful pilot assessment of the impact of suspect hazard designation on their production/use, and that for these chemicals suspect hazard designation had a significant impact on production/consumption.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE
28 CHEMICALS AND ALLIED PRODUCTS

PB85-210176/REB
Develop, Evaluate and Validate Continuous Emission Monitors for Designated Hazardous Pollutants
EPA, Research Triangle Park, NC, EMSL
Midwest Research Institute
G.W. Scheil
May 85, 75p, EPA-600/4-85-037, PC A04/MF A01

Abstract: The objectives of the project are to assess the state of the art of continuous emission monitoring of vinyl chloride monomer (VCM) and to conduct actual experiments to evaluate two monitors in laboratory and in a six-month field testing program. A process GC with flame ionization detector and a photoionization detector were used during this study. Three one-week EPA Method 106 tests were conducted during the six-month field testing program to measure the relative accuracies of the monitors. The precision of both types of detectors all were in the 1% range when evaluated in laboratory. The relative accuracies for both types of detectors were < 10% for VCM concentration between 2 to 10 ppm.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON
75-01-4 VINYL CHLORIDE

PB85-214310/XAB
Dioxin Transport from Contaminated Sites to Exposure Locations: A Methodology for Calculating Conversion Factors
EPA, Washington, DC, OHEA
Battelle Project Management Division
G.W. Dawson, J.M. Meuser, M.C. Lilga
Jun 85, 88p, EPA-600/8-85-012, PC A05/MF A01

Abstract: Procedures have been developed by US EPA for estimating the risk associated with exposure to 2,3,7,8- tetrachlorodibenzo-p-dioxin (dioxin). Concentrations of dioxin at the contaminant source are usually known, but exposure may occur at locations away from the source where concentrations are usually unknown. As a result, a need was identified for estimating dioxin concentrations away from the source. The report discusses the transport of dioxin and presents methods for estimating dioxin concentrations at potential points of exposure away from a source. The transport pathways that were considered to be important were volatilization, suspension and deposition of windblown particles, overland sediment runoff, and in-stream sediment transport. Concentrations at locations away from a source can be estimated using conversion factors for air, soil, and sediment. Concentrations in these media at potential points of exposure can be estimated using the source concentration and factors tha describe the physical characteristics of the source and the transport pathways. Because ingestion of contaminated food-stuffs will result i exposure to dioxin, an example is provided for estimating the amount o dioxin in Missouri beef using distribution patterns and a market dilution concept to estimate chronic exposure within the state.

CL-DIOXIN	DIOXIN
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB85-215333/REB
Destruction of VOCs (Volatile Organic Compounds) by a Catalytic Paint Drying (Infrared) Device
EPA, Research Triangle Park, NC, AEERL
University of Central Florida, Orlando
C.D. Cooper
Jun 85, 73p, EPA-600/2-85-064, PC A04/MF A01

Abstract: The report gives results of tests of a device that catalytically oxidizes fuel to generate infrared (IR) radiation as a new technology for paint drying and curing. During its operation, the device (introduced by SUNKISS Thermoreactors, Inc.) also oxidizes some of the paint solvents that are evaporated in the oven, thus reducing overall emissions of volatile organic compounds (VOCs) into the atmosphere. The system used to test the SUNKISS device was constructed at the University of Central Florida (UCF). It consists of flow control and measuring devices, analytical equipment, and a 1 cu m chamber in which the SUNKISS device was mounted. Three paint solvents--hexane, methyl ethyl ketone (MEK), and toluene--were dispersed in air streams that flowed through the test chamber at various rates. The solvent destruction efficiency of the device was shown to be a strong function of the air residence time in the chamber, but was independent of VOC concentration. Hexane and MEK behaved similarly, while toluene was more reactive. Observed destruction efficiencies ranged from < 20% to > 50%.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
108-88-3	TOLUENE
110-54-3	HEXANE,N-
28	CHEMICALS AND ALLIED PRODUCTS
285	PAINTS AND ALLIED PRODUCTS
78-93-3	BUTANONE,2-

PB85-218683/XAB
Occupational Characteristics of Cancer Victims in Massachusetts 1971-1973
National Institute for Occupational Safety and Health
Sep 84, 193p, PC E09/MF$7.25
NIOSH Pub No. 84-109, AVAIL NIOSH

Abstract: The study examines cancer mortality patterns by occupation for white males in the state of Massachusetts using death records for the years 1971-1973. Its purpose is to identify occupation-cancer associations which, when interpreted in conjuction with results from other studies and hypotheses about potential occupational carcinogens, can serve as leads for more definitive etiological investigations.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE

PB85-221661/XAB
Survey of Carbon Tetrachloride Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
R.H. Howle, S.A. Shareef, J.A. Kowalski
Jul 85, 225p, EPA-450/3-85-018, PC A10/MF A01

Abstract: The document contains information on sources, current emission rates, current emission controls, and cost estimates for additional emission reductions.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE

PB85-223196/XAB
Health Hazard Control Technology Assessment of the Silica Flour Milling Industry
National Institute for Occupational Safety and Health
Oct 84, 62p, PC A04/MF A01
NIOSH Pub No. 84-110, AVAIL NIOSH

Abstract: A health hazard control assessment of the silica (7631869) flour milling industry (SIC-0723) was conducted. Three silica flour mills were evaluated indepth. Engineering controls consisted of local exhaust ventilation of bulk loading operations, injecting agglomerating agents such as water and a commercial foam into products, spraying water on the outer surface of electrostatic devices to agglomerate airborne dust in high dust areas such as rail car loading. All three facilities conducted environmental monitoring of airborne dust concentrations and provided medical monitoring to prevent dust dispersion, prompt cleanup of spills, and regular inspection and preventive maintenance of equipment. At eac facility, management personnel indicated that half of their dust contro1 problems were controlled by effective housekeeping and maintenance procedures. The authors conclude that engineering controls and work practices have generally reduced respirable silica concentrations to below 100 microg/cu m. Recommendations include establishing an effective respirator program and developing stronger leak proof bags.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
7631-86-9	SILICA

PB85-225027/XAB
Development of an Optical Monitor for Toxic Organic Compounds in Air
EPA, Research Triangle Park, NC, EMSL
California University, Berkeley
T. Hadeishi, et al.
Jun 85, 42p, EPA-600/4-85-043, PC A03/MF A01

Abstract: The objectives of the study were: (a) to design, construct and deliver a prototype atomic line molecular spectrometer (ALMS) benzene monitor and (b) to locate matches of atomic lines and sharp molecular absorption features in other toxic organic compounds for possible use in ALMS or TALMS techniques. ALMS and TALMS are newly developed, high resolution molecular absorption techniques which are used in the vacuum untraviolet and ultraviolet regions of the optical spectrum to detect organic molecules in the gas phase. The dual beam prototype ALMS instrument was designed, constructed, tested and delivered to the Environmental Monitoring Systems Laboratory, U.S. EPA Research Triangle Park, North Carolina, in December, 1984. It was designed for monitoring benzene and other organic compounds with the 184.9 and 253.7 nm mercury lines.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
71-43-2	BENZENE

PB85-225175/XAB
Air Toxics Problem in the United States: An Analysis of Cancer Risks for Selected Pollutants
EPA, Washington, DC, OAR
E. Haemisegger, et. al.
May 85, 127p, EPA-450/1-85-001, PC A07/MF A01

Abstract: The report presents estimates of the national cancer incidence associated with about 25 common potential carcinogens found in ambient air. Exposures are estimated using both air quality data and emission-dispersion model techniques. The report on the air toxic problem in the United States is a final version of a September 1984 draft document entitled 'The Magnitude and Nature of the Air Toxics Problem in the United States.' Simultaneously with release of the draft report, EPA solicited comments on the analysis from a peer revie panel made up of non-EPA experts in fields such as toxicology, air monitoring, and air pollution control.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB85-227759/XAB
Review of Sampling and Analysis Methodology for Polynuclear Aromatic Compounds in Air from Mobile Sources
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, B.A. Petersen
Jun 85, 68p, EPA-600/4-85-045, PC A04/MF A01

Abstract: The objective of the program was to review and recommend test compounds and sampling and analysis methods for a future EPA stud of polynuclear aromatic hydrocarbons (PAH) in microenvironments. Review of PAH profiles in ambient air indicated that concentrations of PAH were generally higher in winter than summer and varied with climat and between sampling sites within an urban area. Levels of several PA were found to be proportional to traffic density. Studies of the biological activity of ambient air samples showed that some PAH and their nitrated derivatives are extremely carcinogenic and mutagenic. The following compounds were determined to be the most prevalent and mutagenic in ambient air and were recommended for future study: phenanthrene, pyrene, cyclopenta(c,d)pyrene, benzo(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, 1-nitropyrene, fluoranthrene, benzo(e)pyrene, benzo(g,h,i)perylene, coronene, and 3-nitrofluoranthene. In the review of PAH sampling methods, collectio of both gaseous and particulate-bound PAH was determined to be necessary to accurately characterize health effects of PAH in ambient air. Most studies have used filters to sample particulate-bound PAH and absorbents to collect vapor phase PAH. The major sampling problem encountered were PAH losses due to volatilization and reactivity.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION

PB85-228120/XAB
Respiratory Carcinogenicity of Diesel Fuel Emissions
EPA, Research Triangle Park, NC, HERL
IIT Research Institute
A.M. Shefner, et al.
Jan 85, 311p, EPA-600/1-85-004, PC A14/MF A01

Abstract: The carcinogenicity of diesel exhaust particles (administered by fifteen weekly intratracheal instillations) was compared to that of organic extracts of diesel particles, coke oven emissions, roofing tar condensate and cigarette smoke condensate. Appropriate solvent controls, untreated controls and positive controls were included in the design of the experiment. The overall incidence of respiratory tract tumors in any of the treatment groups was not significantly higher than in control hamsters. Similarly, there were no significant differences in the survival rates of hamsters treated with test materials from those of their respective controls. Hamsters treated with test material generally showed significantly lower mean body weights than control animals. Treated hamsters generally showed delay in time to reach maximum body weight when compared to hamsters i control group. Treatment of hamsters with test materials induced a variety of hyperplastic, proliferative and inflammatory lesions of the respiratory tract. The highest incidence rates and greatest severity of the lesions were induced by diesel exhaust particles and coke oven emissions. Diesel exhaust extract and benzo(a)pyrene were less reactive, and cigarette smoke condensate and roofing tar volatiles produced the lowest incidence of respiratory tract lesions.

CL-CARCIN	CARCINOGENS
CL-DIESEL	DIESEL
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
4111	LOCAL AND SUBURBAN TRANSIT

PB85-233112/XAB
Equipment Leaks of VOC (Volatile Organic Compound) in Natural Gas Production Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
May 85, 121p, EPA-450/3-82-024B, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
13	OIL AND GAS EXTRACTION
132	NATURAL GAS LIQUIDS
1321	NATURAL GAS LIQUIDS

PB85-233492/XAB
Ambient Monitoring for PCB Near Three Landfills in the Bloomington, Indiana Area
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
D.L. Sgontz, J.E. Howes
Jun 85, 145p, EPA-600/4-85-044, PC A07/MF A01

Abstract: A monitoring program was conducted to determine PCB levels in ambient air on and in the vicinity of three landfills in the Bloomington, Indiana area. Fixed-height measurements were made at locations on the sites where capacitors containing PCB were exposed (hot spots) and at nominally upwind and downwind locations. Vertical PCB concentration profiles were also obtained at five elevations (2 to 180 cm) above selected hot spots. Sampling was performed over 8-hour daytime periods (approximately 0900-1700 hours) and over 24-hour periods at various on- and off-site locations. Polyurethane foam (PUF cartridges used either with Du Pont personal-type sampling pumps or EPA-developed high volume samplers were used for collection of PCB fro the ambient air. The quantity of PCB (as Aroclor 1242) in the PUF cartridges was determined by extraction and analysis of the extract by electron-capture gas chromatography (EPA Method 608). Meteorological conditions were also measured at the sites during the field monitoring period.

CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
TM	TECHNICAL MONITORING
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB85-233518/XAB
Survey of Perchloroethylene Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Jun 85, 133p, EPA-450/3-85-017, PC A07/MF A01

Abstract: The potential health impact of perchloroethylene emissions is being investigated. The document contains information on the sources of perchloroethylene emissions, current emission levels, and State regulations applicable to emission sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7211	POWER LAUNDRIES, FAMILY & COMMERCIAL
7212	GARMENT PRESSING & CLEANERS' AGENTS
7216	DRY CLEANING PLANTS, EXCEPT RUG
75	AUTO REPAIR, SERVICES, AND GARAGES
753	AUTOMOTIVE REPAIR SHOPS

PB85-236099/XAB
Metabolic Activation Pathways of Cyclopenta-Fused PAH (Polycyclic Aromatic Hydrocarbons) and Their Relationship to Genetic and Carcinogenic Activity
EPA, Research Triangle Park, NC, HERL
S. Nesnow, et al.
Aug 85, 12p, EPA-600/D-85-161, PC A02/MF A01

Abstract: Cyclopenta-fused PAH are a novel class of environmental PAH of which the best known example is cyclopenta(c,d)pyrene. The fusion of an unsaturated cyclopenta-ring onto a PAH markedly enhances its activity as: (1) a gene mutagen in bacteria and cultured mammalian cells, (2) a transforming agent in rodent cells, and (3) as an initiator of mouse skin tumors. A series of four cyclopenta-fused isomers of benz(a)anthracene and the cyclopenta-fused isomers of anthracene and phenanthrene were studied with respect to: (1) the major rat liver microsomal metabolites, (2) their activity as gene mutagens in Salmonella typhimurium and Chinese hamster V79 cells, and (3) their ability to morphologically transform C3H10T1/2CL8 mouse embryo fibroblasts. For all six isomers, the dihydrodiol arising from oxidation and hydration at the cyclopenta-ring was a major pathway in Aroclor-1254 induced rat liver microsomes. All six isomers were activ in mutating Salmonella typhimurium. The four benz(a)anthracene isomer were also active in mutating V79 cells at the HGPRT locus.

CL-PAH	POLYAROMATIC HYDROCARBONS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
11097-69-1	AROCLOR 1254
120-12-7	ANTHRACENE
56-55-3	BENZ(A)ANTHRACENE

PB85-239630/XAB
Emergency and Continuous Exposure Guidance Levels for Selected Airborn Contaminants. Volume 4
National Academy of Sciences
May 85, 113p, PC A06/MF A01

Abstract: These are emergency exposure guidance levels recommended by the National Research Council Committee on Toxicology for chemicals of interest to the U.S. Armed Forces because they may affect personnel during various operations. The report provides a short review of the chemical and physical properties of the chemicals and their toxic-potential in animals and humans.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY
9711	SIC - 9711 NATIONAL SECURITY

PB85-239952/XAB
Nonmetallic Mineral Processing Plants: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
J.R. Farmer
Apr 85, 96p, EPA-450/3-83-001B, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3299	NONMETALLIC MINERAL PRODUCTS, NEC

PB85-240083/XAB
Prudent Practices for Disposal of Chemicals from Laboratories
National Research Council
1983, 297p, PC A13/MF A01
ISBN 0-309-03390-X, $16.50

Abstract: All laboratory work with chemicals eventually produces chemical waste, and those who generate such waste have moral and legal obligations to see that the waste is handled and disposed of in ways that pose minimum potential harm, both short term and long term, to health and the environment. The objectives of this report are to present guidelines for laboratories in establishing a waste management system, to give specific recommendations to laboratory managers for th disposal of chemicals, and to make recommendations for constructive changes in regulations for disposal of chemicals from laboratories. This guide thoroughly assesses the full range of hazards encountered i laboratories and provides recommendations for handling dangerous substances in both ordinary and emergency situations.

CL-HAZWAST	HAZARDOUS WASTES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
SA	SOURCE ASSESSMENT
73	BUSINESS SERVICES
739	MISCELLANEOUS BUSINESS SERVICES
7391	RESEARCH & DEVELOPMENT LABORATORIES
7395	PHOTOFINISHING LABORATORIES
7397	COMMERCIAL TESTING LABORATORIES
7399	BUSINESS SERVICES, NEC

PB85-240455/XAB
Methodology for Characterization of Uncertainty in Exposure Assessment
EPA, Washington, DC, OHEA
Research Triangle Institute
R.W. Whitmore
Aug 85, 196p, EPA-600/8-85-009, PC A09/MF A01

Abstract: Exposure assessments, except those based upon measured exposure levels for a probability sample of population members, rely upon a model to predict exposure. The model may be any mathematical function that estimates the population distribution of exposure or an individual's exposure as a function of one or more input variables. Whenever a model that has not been validated is used as the basis for an exposure assessment, the uncertainty associated with the exposure assessment may be substantial. The primary characterization of uncertainty is at least partly qualitative in this case, i.e., it includes a description of the assumptions inherent in the model and their justification. Sensitivity of the exposure assessment to model formulation can be investigated by replicating the assessment for plausible alternative models. When an exposure assessment is based upon directly measured exposure levels for a probability sample of population members, uncertainty can be greatly reduced and described quantitatively. The primary sources of uncertainty are measurement errors and sampling errors. A quality assurance program should be designed into the study to ensure that the magnitude of measurement errors can be estimated. The effects of all sources of random error should be measured quantitatively.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB85-241800/XAB
Assessment of the Mutagenic Potential of Carbon Disulfide, Carbon Tetrachloride, Dichloromethane, Ethylene Dichloride, and Methyl Bromide: A Comparative Analysis in Relation to Ethylene Dibromide
EPA, Washington, DC, OHEA
V.L. Vaughan-Dellarco. J.R. Fowle, S. Rosenthal
Aug 85, 154p, EPA-600/6-85-001, PC A08/MF A01

Abstract: The document provides an evaluation of the mutagenic potential of five alternative fumigants to ethylene dibromide(EDB). These include carbon disulfide(CS2), carbon tetrachloride(CC14), dichloromethane(DCM), ethylene dichloride(EDC), and methyl bromide (MB). Of the five proposed alternatives, DCM, EDC and MB caused gene mutations in lower and higher eucaryotes. These three agents have not been well studied for their potential to cause chromosome damage. There are no available data on the ability of these agents to cause gene mutations in whole mammals, except for EDC, for which the evidenc is suggestive. The potential of the alternatives to reach whole mamma germcell DNA has not been studied. But DCM, EDC, and MB do cause heritable effects in Drosophila. The mutagenic potencies of each agen were compared within and amoung various assay systems. Regarding the strength of mutagenicity, EDB is clearly a stronger mutagen than any o the proposed alternative fumigants. Differences in mutagenicity potency among the alternatives cannot be delineated because of limited data usually derived from different laboratories. When final judgment could not be reached because of gaps in current knowledge, recommendations were made on additional studies.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
56-23-5	CARBON TETRACHLORIDE
74-83-9	METHYL BROMIDE
75-09-2	METHYLENE CHLORIDE
75-15-0	CARBON DISULFIDE

PB85-243533/XAB
Updated Mutagenicity and Carcinogenicity Assessment of Cadmium: Addendum to the Health Assessment Document for Cadmium
EPA, Washington, DC, OHEA
Jun 85, 206p, EPA-600/8-83-025F, PC A10/MF A01

Abstract: The document evaluates the mutagenicity and carcinogenicity of cadmium, supplementing an earlier document (Health Assessment Document for Cadmium, May 1981) which dealt with all health effects. Since the earlier document was prepared, a rat inhalation carcinogenicity study has been reported and several epidemiology and mutagenicity papers have been published. This document concludes that (1) there is mixed evidence on the mutagenicity of various cadmium salts; (2) cadmium chloride aerosol induces lung cancer in rats; (3) injected cadmium salts induce injection site sarcomas and testicular tumors in both mice and rats; (4) there is limited epidemiologic evidence that inhaled cadmium is dose-related to lung cancer in expose workers; (5) there is no evidence that cadmium is carcinogenic via ingestion, which is a major route of human exposure, and the upper limit of potency via ingestion is at least 100 times less than via inhalation.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3339	PRIMARY NONFERROUS METALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB85-245280/XAB
Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry
EPA, Cincinnati, OH, WERL
Radian Corp.
Jul 85, 759p, EPA-600/2-85-085, PC A99/MF E03

Abstracts: The report presents a detailed analysis of the plastics an resins production industry, which includes operations that convert industrial organic chemicals into solid or liquid polymers. Elements of the analysis include an industry definition, raw materials, product and manufacturers, environmental impacts, and occupational health concerns. The following polymers are discussed: acrylic resins, acrylonitrile-butadiene-styrene (ABS), alkyd molding resins, amino resins, engineering thermoplastics, epoxies, fluoropolymers, phenolic resins, polyacetal, polyamides, polimides, polyolefins (polybutylene, polyethylenes, polyproplyene), polycarbonate, polyesters, polystyrenes polyurethane, polyvinyl acetate and alcohol, polyvinyl chloride, polyvinylidene chloride, and styrene-acrylonitrile (SAN).

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS
62-75-9	N-NITROSODIMETHYLAMINE
9002-86-2	POLYVINYL CHLORIDE LATEX
9002-88-4	POLYETHYLENE
9002-89-5	POLYVINYL ALCOHOL
9003-07-0	PROPENE POLYMERS
9003-54-7	ACRYLONITRILE POLYMER WITH STYRENE

PB85-245298/XAB
Industrial Process Profiles for Environmental Use. Chapter 10a. The Plastics and Resins Processing Industry
EPA, Cincinnati, OH, WERL
Radian Corp.
Jul 85, 431p, EPA-600/2-85-086, PC A19/MF A01

Abstract: The report contains a detailed analysis of the plastics and resins processing industry, which includes operations that convert polymers and resins into consumer products. Analytical elements include industry definition, raw material, products, manufacturers, environmental impacts and occupation health impacts. For the purpose of the analysis, the Plastics and Resins Processing Industry has been divided into eleven (11) segments, some of which are comprised of a number of different processes: calendaring, casting, coating, compounding, extrusion, finishing, foam (expandable bead, extruded thermoplastic, multicomponent thermoset, and structural), laminating, molding (blow, compression, injection, reaction injection, rotational and transfer), reinforced plastics and thermoforming.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB85-245645/XAB
Evaluation of Polyurethane Foam Cartridges for Measurement of Polynuclear Aromatic Hydrocarbons in Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, W.E. Bresler, S.W. Hannan
Aug 85, 37p, EPA-600/4-85-055, PC A03/MF A01

Abstract: This project evaluated polyurethane foam (PUF) cartridges as collection media for quantification of vapor phase polynuclear aromatic hydrocarbons (PAHs) in air. Two cleanup methods for PUF cartridges--compression rinsing and combined compression rinsing and Soxhlet extraction--have been evaluated, and successfully remove interfering material and background PAHs from the PUF. The compression rinsing method is recommended because it is easier, faster, and cheaper. Two procedures for extraction of PAHs from the PUF matrix, Soxhlet extraction and compression rinsing, were compared. These sample extracts were analyzed by on-column injection, electron impact gas chromatography/mass spectrometry (EI GC/MS) to determine PAHs. The results showed that compression rinsing is comparable to conventional Soxhlet extraction, and that both methods successfully remove PAHs from the PUF cartridges. The stability study was carried out to determine the stability of PAHs adsorbed on PUF cartridges as a function of storage time between collection and extraction. The results indicated that the levels of the spiked perdeuterated benzo(a)pyrene decreased significantly during storage. The rate of decrease was much faster when the PUF cartridges were stored in light. Other PAH levels were not adversely influenced by the storage time.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON

PB85-248383/XAB
Health Assessment Document for Nickel
EPA, Research Triangle Park, NC, ECAO
S. Bayard, et al.
Sep 85, 433p, EPA-600/8-83-012F, PC A19/MF A01

Abstract: Nickel is found in nature as a component of silicate, sulfide, or arenide ores. Uses for nickel and its compounds include nickel alloys, electroplating baths, batteries, textile dyes and mordants, and catalysts. The predominant forms of nickel in the atmosphere are nickel oxides and complex oxides of nickel. Nickel is also found in water and soil as a result of both natural and anthropogenic sources. Routes of nickel intake for man and animals ar inhalation, ingestion and percutaneous absorption. The pulmonary absorption of nickel compounds varies according to chemical and physical form, with insoluble compounds generally being cleared more slowly. Gastrointestinal intake by man is high ranging from 300 to 500 micrograms daily; however, absorption is low, averaging one to ten percent of intake. Percutaneous absorption of nickel often occurs through contact with nickel-containing commodities used in food preparation; such contact is related to hypersensitivity and skin disorders. Absorbed nickel is carried by the blood and distributed to various tissues depending on route of intake. Inhaled nickel compounds lead to highest levels in lung, brain, kidney and liver. In humans, age-dependent accumulation appears to occur only in the lung.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
10	METAL MINING
106	FERROALLOY ORES, EXCEPT VANADIUM
1061	FERROALLOY ORES, EXCEPT VANADIUM
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
335	NONFERROUS ROLLING AND DRAWING
3356	NONFERROUS ROLLING AND DRAWING, NEC
7440-02-0	NICKEL

PB85-248987/XAB
Products of Thermal Degradation of Dielectric Fluids
EPA, Washington, DC, OTS
Midwest Research Institute
S.E. Swanson, M.D. Erickson, L. Moody
May 85, 32p, EPA-560/5-85-022, PC A03/MF A01

Abstract: The report describes the results of a series of experiments which were conducted to augment the data presented in a previous report (PB85-138535/REB, EPA-560/5-84-009). The work presented here includes both repeat runs of those previously reported and also investigations of materials not previously tested. The results of the repeat runs correlate well with the previously reported results. The formation of PCDFs and PCDDs from the PCB-spiked mineral oil, as well as the calculated destruction efficiencies for PCBs, closely match the previously reported results. The repeat chlorobenzene runs show higher levels of PCDF and PCDD formation than previous runs. However, several concentrations in the previous report are 'greater than' values; hence, comparison is difficult. Significant amounts of PCDFs and PCDDs were formed from the tetrachloroethylene fluid. The two high temperature hydrocarcon fluids did not produce PCDFs or PCDDs. It appears that, under these thermal destruction conditions, the extent of PCDF formation varies among dielectric fluids by several orders of magnitude.

CL-PCB	POLYCHLORINATED BIPHENYLS
CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
127-18-4	TETRACHLOROETHYLENE
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB85-249696/XAB
Health Assessment Document for Trichloroethylene
EPA, Washington, DC, OHEA
L.D. Anderson, et al.
Jul 85, 378p, EPA-600/8-82-006F, PC A17/MF A01

Abstract: Trichloroethylene (TCI) is a solvent widely used in the industrial degreasing of metals. It has been detected in the ambient air of a variety of urban and nonurban areas of the United States and in natural and municipal waters. The weight of available evidence obtained from both animal and human data suggests that long-term exposure to environmental levels of TCI poses no serious health concern to the general population. No teratogenic potential has been demonstrated for TCI in studies conducted to date with experimental animals. With respect to the mutagenic potential of TCI, the data on pure TCI do not allow a conclusion to be drawn. If TCI is mutagenic, the available data suggest it would be a very weak, indirect mutagen. Based on available animal data, there is sufficient animal evidence for carcinogenicity. Based on the Agency's Proposed Guidelines for Carcinogen Assessment, the overall evidence for TCI would result in a classification of B2, i.e., a probable human carcinogen.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
79-01-6	TRICHLOROETHYLENE

PB85-249704/XAB
Health Assessment Document for Tetrachloroethylene (Perchloroethylene)
EPA, Washington, DC, OHEA
V. Benignus, et al.
Jul 85, 268p, EPA-600/8-82-005F, PC A12/MF A01

Abstract: Tetrachloroethylene (PCE) is a volatile solvent with important commercial applications. It has been detected in the ambien air of a variety of urban and nonurban areas of the United States. It has less frequently been detected in water but has been monitored generally at levels of 1 ppb or less. The lowest-observed-adverse-effect-level, based on central nervous system dysfunction, is about 100 ppm. Toxicity testing in experimental animals, coupled with limited human data, suggests that long term exposure of humans to ambient levels of PCE is not likely to represent a health concern. At the current time, the teratogenic potential of PCE for humans is unknown; the mammalian animal tests performed to date do not indicate any significant teratogenic potential. Although PCE epoxide has been found to be positive with respect to mutagenicity in bacterial systems, the data on pure PCE suggest that if it is mutagenic, it is a weak mutagen. PCE has been demonstrated to induce malignant tumors of the liver in mice.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB85-249787/XAB
Review of New Source Performance Standards for Sulfuric Acid Plants
EPA, Research Triangle Park, NC, OHEA
Mar 85, 98p, EPA-450/3-85-012, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7446-09-5	SULFUR DIOXIDE
7664-93-9	SULFURIC ACID

PB86-100476/XAB
Portland Cement Plants: Background Information for Proposed Revision to Standards
EPA, Research Triangle Park, NC, OHEA
May 85, 125p, EPA-450/3-85-003A, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC

PB86-100559/XAB
Evaluation of the Efficiency of Industrial Flares: Flare Head Design and Gas Composition
EPA, Research Triangle Park, NC, AEERL
Energy and Environmental Research Corp.
J.H. Pohl, N.R. Soelberg
Sep 85, 140p, EPA-600/2-85-106, PC A07/MF A01

Abstract: The report gives continued Phase 4 results of a research program to quantify emissions from, and efficiencies of, industrial flares. Initial results were limited to tests conducted burning propane/nitrogen mixtures in pipe flares without pilot light stabilization. The work reported here extends the previous results to other flare head designs and other gases and includes a limited investigation of the influence of pilot flames on flare performance. Results included: (1) flare head design influences the flame stabilit curve; (2) combustion efficiency can be correlated with flame stabilit for pressure heads and coanda steam injection heads; (3) efficiency of air-assisted heads correlated with the momentum ratio of air to fuel (the heating value of the gas had only minor influence), (4) limited data on an air-assisted flare show that a pilot light improves flame stability, (5) the destruction efficiency of compounds depends on the structure of the compounds, and (6) for compounds tested in this program, the destruction efficiency of different compounds could be correlated with the flame stability curve for each.

CT	CONTROL TECHNOLOGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2899	CHEMICAL PREPARATIONS, NEC

PB86-100641/XAB
Health Assessment Document for Vinylidene Chloride
EPA, Research Triangle Park, NC, ECAO
Syracuse Research Corp.
D.K. Basu, et al.
Aug 85, 310p, EPA-600/8-83-031F, PC A14/MF A01

Abstract: Vinylidene chloride is a highly reactive, flammable, clear colorless liquid. In the absence of chemical inhibitors, it can produce violently explosive, complex peroxides. The estimated ambient air level of vinylidene chloride in urban-suburban areas of the United States is 20 micrograms/cu m. The median concentration (14 micrograms/cu m) for ambient air at point sources of emission is substantially higher. Following oral or inhalation exposure, mammals readily absorb vinylidene chloride. Metabolites of vinylidene chloride, formed in the liver, produce toxic lesions in the liver and kidneys, with inhibitors of metabolism providing protection from vinylidene chloride toxicity. The acute hepatotoxicity of vinylidene chloride is greater than that of any other chloroethylene. Based on the overall evidence, VDC would be a Group 3 chemical according to the IARC (International Agency for Research on Cancer's) approach; and by definition, a Group 3 chemical cannot be classified according to its carcinogenicity to humans. However, the mutagenic activity of VDC, its chemical structure, its activity as a tumor initiator in mouse skin, and the ability of its metabolites to react with DNA raise concern that the total body of evidence should not be lightly dismissed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
75-35-4	DICHLOROETHYLENE,1,1-

PB86-102597/XAB
Health Assessment Document for Ethylene Oxide
EPA, Washington, DC, OHEA
D.A. Gray, et al.
Jun 85, 304p, EPA-600/8-84-009F, PC A14/MF A01

Abstract: Ethylene oxide is used as an intermediate in the synthesis of ethylene glycol. Small amounts of this epoxide are used as a sterilant or pesticide in commodities, pharmaceuticals, medical devices, tobacco, and other items, representing a considerable potential for human exposure. The pharmacokinetics of ethylene oxide have not been studied extensively. While only limited studies found in the literature concerned the absorption of this chemical, toxicity data suggest that absorption occurs via the respiratory and gastrointestinal tracts. Acute exposure to ethylene oxide in humans results in symptoms of headache, vomiting, dyspnea, and diarrhea. Subacute and chronic effects are not well documented. Data indicated many different types of genetic damage may be induced following exposure to ethylene oxide. It was mutagenic in the Ames Salmonella assay to Bacillus subtilis and to Drosophila melanogaster, as well as in cultured mammalian cell and assay systems. The alkylating and mutagenic properties of ethylene oxide cause concern about its potential carcinogenicity. Though there are no definitive, epidemiologic studies, the data are consistent with the animal data in that there seems to be a strong association between an increased risk of cancer, especially leukemia, and prolonged inhalation exposure to ethylene oxide.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
21	TOBACCO MANUFACTURES
211	CIGARETTES
212	CIGARS
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
38	INSTRUMENTS AND RELATED PRODUCTS
384	MEDICAL INSTRUMENTS AND SUPPLIES
51	WHOLESALE TRADE-NONDURABLE GOODS
519	MISC. NONDURABLE GOODS
5194	TOBACCO AND TOBACCO PRODUCTS
75-21-8	ETHYLENE OXIDE

PB86-103041/XAB
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 2. Design for National Survey of Emission of Specific Compounds for Coal Fired Utility Boiler Plants
EPA, Washington, DC, OTS
Midwest Research Institute
R.M. Lucas, D.K. Melroy
Aug 85, 64p, EPA-560/5-83-005, PC A04/MF A01

Abstract: The emission of several toxic compounds in the polycyclic organic group has been reported from stationary combustion processes. The potential exists for the formation of these compounds as the results of combustion of coal-refuse, wood, municipal refuse, waste oil, and coal. A pilot study was designed to ascertain the number of combustion sites and the number of days of sampling required at each site to estimate the level and prevalence of these toxic substances in the emissions from combustion processes and to do so at a minimum cost. For each facility a complex, multimedia sampling design was developed for the collection of solid, liquid, and gaseous influents and effluents. In addition, measurements of process parameters were also taken. This design allowed for the estimation of the inputs into the process, the efficiency of the combustion process, and the emissions from the process. Using the estimates of the variability of the resulting data and cost estimates based on the experience gained in the pilot, a national survey design was developed. Sampling is planned for seven coal and nine refuse combustion facilities for 5 days each.

CL-PCB	POLYCHLORINATED BIPHENYLS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYLS

PB86-103058/XAB
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 4. National Estimates of Emission of Specific Compounds from Coal Fired Utility Boiler Plants
EPA, Washington, DC, OTS
Midwest Research Institute
R.M. Lucas, G.W. Kircher
Aug 85, 31p, EPA-560/5-83-007, PC A03/MF A01

Abstract: Specimens were acquired from influents and effluents from seven coal-fired utility boilers. The specimens were chemically analyzed for toxic compounds in the polycyclic organic matter group. The specific target compounds were polychlorinated dibenzo(p)-dioxins (PCDDs), dibenzofurans (PCDFs), biphenyls (PCBs), selected polynuclear aromatic hydrocarbons (PAHs) and selected phthalates. Twelve PAH compounds and six phthalate compounds were included among the targette compounds. Naphthalene was the most prevalent PAH compound detected. It was found in the flue gas emissions from all seven facilities. Other PAHs were also detected in the coal at all seven facilities but were only rarely detected in the other media. No PCDDs or PCDFs were detected in any of the acquired specimens. PCBs were only detected in one other media, the influent combustion air.

CL-PCB	POLYCHLORINATED BIPHENYLS
CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYLS

PB86-105004/XAB
Health Assessment Document for Chloroform
EPA, Washington, DC, OHEA
Aug 85, 415p, EPA-600/8-84-004F, PC A18/MF A01

Abstract: Chloroform is ubiquitous in the environment. The northern hemisphere background average has been determined to be approximately 14 ppt and the global average is 8 ppt. After inhalation or ingestion, highest concentrations are found in tissues with high lipid content. Chloroform has been detected in fetal liver. Chloroform would be expected to appear in human milk, because it has been found in cow's milk, cheese, and butter. Subchronic and chronic toxicity experiments with rats, mice, and dogs did not clearly establish a no-effect exposure level for systemic toxicity. Chloroform appears to have teratogenic potential when inhaled. Delayed fetal development occurred at an exposure level (30 ppm) that produced minimal maternal effects. The majority of the assays for mutagenicity and genotoxicity have yielded negative results; however, many of these results are inconclusive because of various inadequacies in the experimental protocols used.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
67-66-3	CHLOROFORM

PB86-105913/XAB
Current Intelligence Bulletin 44, Dinitrotoluenes (DNT)
National Institute of Occupational Safety and Health
Jul 85, 26p, PC A03/MF A01
NIOSH PUB NO. 85-109, Unavail NIOSH

Abstract: Rats which over a 1-year period ingested diets containing a technical grade mixture of dinitrotoluenes (TDNT), primarily composed of the 2,4- and the 2,6-isomers, or which were fed only 2,6-dinitrotoluene (2,6-DNT) developed cancers of the liver. The liver cancers consisted of hepatolcellular carcinomas and in some cases chloangiocarcinomas. Feeding or oral administration of TDNT or 2,6-DNT for up to 2 years induced decreased spermatogenesis, aspermatogenesis, or testicular atrophy in dogs, rats, or mice. Nonfunctioning ovaries were found in mice fed TDNT for 2 years. Based on these data, the National Institute of Occupational Safety and Health (NIOSH) recommends that TDNT and 2,6-DNT be regarded as potential human carcinogens in the workplace and possible inducers of adverse reproductive effects.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH SCIENCE
121-14-2	DINITROTOLUENE,2,4-
606-20-2	DINITROTOLUENE,2,6-

PB86-107042/XAB
Methods for Assessing Exposure to Chemical Substances. Volume 4: Methods for Enumerating and Characterizing Populations Exposed to Chemical Substances
EPA, Washington, DC, OPTS
Versar, Inc.
D.A. Dixon, et al.
Jul 85, 298p, EPA-560/5-85-004, PC A13/MF A01

Abstract: The report, one of a series of reports concerning exposure assessment, describes methods for estimating the sizes of populations potentially exposed to chemical substances. Five categories of exposed populations are covered: (1) populations exposed to chemicals in the ambient environment, (2) workers, (3) populations exposed through ingestion of chemicals in food, (4) users of consumer products, and (5) populations exposed through ingesting chemicals in drinking water. The report contains general data on populations from governmental agencies such as the U.S. Bureau of Census, U.S. Department of Labor, U.S. Department of Agriculture, and EPA's Office of Drinking Water. It also contains step-by-step methods for locating and using data to enumerate each subpopulation identified as potentially exposed to toxic chemicals. Appendix A contains sample calculations illustrating the methods presented in the text. Appendix B is OSHA's Industry-Occupation (I-O) Matrix, described in Section 3 of the report.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-107059/XAB
Methods for Assessing Exposure to Chemical Substances, Volume 3. Methods for Assessing Exposure from Disposal of Chemical Substances
EPA, Washington, DC, OPTS
Versar, Inc.
L.C. Adkins, et al.
Jul 85, 393p, EPA-560/5-85-003, PC A17/MF A01

Abstract: The report, which is part of a series of volumes on exposure assessment, presents methods for estimating environmental releases of chemical substances from disposal sites. These release estimates must be used in conjunction with procedures given in Volume 2 (ambient exposure category) and Volume 5 (drinking water exposure category) in order to complete the exposure assessment. A five-stage methodological framework outlines the major steps that must be taken in order to estimate releases from disposal by landfilling, land treatment, surface impoundment, municipal wastewater treatment, incineration, and deep-well injection. The methods are applicable to chemical substances in all of the following waste categories: municipal solid waste, industrial solid waste (hazardous and nonhazardous), municipal wastewater, wastewater treatment sludges, and incinerator residues. The report provides guidance on information resources useful in completing each step and also discusses data gaps and limitations in predictive capability. Sample data and summaries of information resources are included in appendices.

CL-HAZWAST	HAZARDOUS WASTES
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
494	WATER SUPPLY
495	SANITARY SERVICES

PB86-107067/XAB
Methods for Assessing Exposure to Chemical Substances, Volume 2. Methods for Assessing Exposure to Chemical Substances in the Ambient Environment
EPA, Washington, DC, OPTS
Versar, Inc.
J.R. Freed, et al.
Jul 85, 419 p, EPA-560/5-85-002, PC A18/MF A01

Abstract: The document is the second in a series of volumes developed to assist in the assessment of exposure to chemical substances. This report presents methods that can be used to estimate exposure to chemical substances in the ambient environment and includes many tools, data sources, and models that are useful in the exposure estimation procedures. The volume is organized to reflect the flow of information in an ambient exposure assessment. Sections 2 and 3 provide information on the preliminary data required, i.e., production volume, physicochemical properties, and uses of the chemical substance. Section 4 contains a description of the availability and use of monitoring data bases and how monitoring data are integrated in the overall methods. Section 5 indicates how the population methods (Volume 4) fit into the overall process. Section 6 is the core of this volume; it addresses the analytical framework for calculating exposure and discusses how to access appropriate data for each of the analytical elements. To supplement the text, an Information Resource Matrix which indexes data bases and other resources is included as Appendix A; a list of chemicals studied and regulated by federal agencies as of 1984 is provided as Appendix B; and examples of pertinent data base outputs are given in Appendix C.

CL-HAZWAST	HAZARDOUS WASTES
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-107083/XAB
Methods For Assessing Exposure to Chemical Substances. Volume 1. Introduction
EPA, Washington, DC, OPTS
Versar, Inc.
M.A. Callahan, et al.
Jul 85, 103p, EPA-560/5-85-001, PC A06/MF A01

Abstract: The document is the first in a series of volumes developed for the U.S. Environmental Protection Agency, Office of Toxic Substances, to assist in the assessment of exposure to chemical substances. This introductory volume discusses issues of general interest in all exposure assessments, including a discussion on planning an assessment, and summarizes the contents of the next eight volumes. Planning an exposure assessment is a function of the purpose, scope, depth, and approach of the assessment. The report presents a list of questions that, when answered, aid the assessor in determining the resources and tools needed to do the assessment. The organization of an exposure assessment is discussed, and a basic outline that can be used is provided. The content of major sections in an exposure assessment are discussed: General Information, Sources, Exposure Pathways and Environmental Fate, Monitoring or Estimated Concentrations, Exposed Populations, and the Integrated Exposure Analysis. An overview of exposure assessments in different settings is presented. Different types of assessments (screening level, intermediate level, detailed, and special assessments) are described.

CL-HAZWAST	HAZARDOUS WASTES
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-107604/XAB
Survey of Methylene Chloride Emission Sources
EPA, Research Triangle Park, NC, OHEA
June 85, 176p, EPA-450/3-85-015, PC A09/MF A01

Abstract: The potential health impact of methylene chloride emissions is being investigated. The document contains information on the sources of methylene chloride emissions, current emission levels, control methods that could be used to reduce methylene chloride emissions, and cost estimates for employing controls.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
20	FOOD AND KINDRED PRODUCTS
209	MISC. FOODS AND KINDRED PRODUCTS
2095	ROASTED COFFEE
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
2822	SYNTHETIC RUBBER
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES
75-09-2	METHYLENE CHLORIDE

PB86-107943/XAB
Survey of Trichloroethylene Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
R.F. Pandullo, et al.
Jul 85, 133p, EPA-450/3-85-021, PC A07/MF A01

Abstract: The potential health impact of trichloroethylene emissions is being investigated. This document contains information on the sources of trichloroethylene emissions, current emission levels, control methods that could be used to reduce trichloroethylene emissions, and cost estimates for employing controls.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
79-01-6	TRICHLOROETHYLENE

PB86-109097/XAB
Analytical Method: The Analysis of By-Product Chlorinated Biphenyls in Air. Revision 2
EPA, Washington, DC, OPTS
Midwest Research Institute
M.B. Erickson
May 85, 66p, EPA-560/5-85-011, PC A04/MF A01

Abstract: This is a gas chromatographic/electron impact mass spectrometric (GC/EIMS) method applicable to the determination of chlorinated biphenyls (PCBs) in air emitted from commercial production through stacks, as fugitive emissions, or static (room, other containers, or outside) air. The PCBs present may originate either as synthetic by-products or as contaminants derived from commercial PCB products (e.g., Aroclors), and may be present as single isomers or complex mixtures, and may include all 209 congeners from monochlorobiphenyl through decachlorobiphenyl. A variety of general and specific sample preparation options are presented in this method. In this method PCBs are detected and quantitated by homolog group. The results can be summed to give a total PCB value comparable to results generated by other methods or they may be presented as 10 individual homolog values. This homolog distribution can provide additional quantitative information on the composition and source of the PCBs. The method performance is assessed for each sample. A set of four (sup 13)C-labeled PCBs is employed as recovery surrogates. If the surrogates are recovered and other QC parameters are within acceptable limits, then the data may be considered valid.

CL-PCB	POLYCHLORINATED BIPHENYLS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS/AM	SOURCE SAMP/AMB MON
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYLS

PB86-110921/XAB
Assessment of Organic Contaminants in Emissions from Refuse-Derived Fuel Combustion
EPA, Cincinnati, OH, HWERL
Energy Resources Co., Inc.
J. Chrostowski, et al.
Sep 85, 153p, EPA-600/2-85-115, PC A08/MF A01

Abstract: Organic contaminants in emissions from refuse-derived fuel combustion were investigated in a 20-inch-diameter atmospheric fluidized-bed combustor. Combinations of coal/EcoFuel/MSW/toluene were burned in the combustor with temperatures ranging from 1250 to 1550 degrees F. A Source Assessment Sampling System (SASS) was used to sample the stack gas; Level 1 methodology was used to analyze the organic contaminant levels. Combustion efficiencies of 93 to 98 percent were achieved in the test burns. Combustion of the EcoFuel generated fewer organic emissions than combustion of coal at similar combustion temperatures. The fine particulate collected by the SASS train filter contained higher concentrations of extractable organics than the reactor fly ash and the SASS cyclone samples. Combustion of a toluene/EcoFuel mix generated a large number of benzene derivatives not seen in the combustion of pure EcoFuel. Polycyclic aromatic hydrocarbons were the dominant organic compounds contained in the XAD-2 resin extract from coal combustion. A number of different priority pollutants were identified in the samples collected.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB86-117587/XAB
Locating and Estimating Air Emissions from Sources of Manganese
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 119p, EPA-450/4-85-007H, PC A06/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with manganese. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of manganese and in making gross estimates of air emissions therefrom. This document presents information on 1) the types of sources that may emit manganese; 2) process variations and release points that may be expected within these sources; and 3) available emissions information indicating the potential for manganese release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
286	INDUSTRIAL ORGANIC CHEMICALS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
7439-96-5	MANGANESE

PB86-117595/XAB
Locating and Estimating Air Emissions from Sources of Phosgene
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 61p, EPA-450/4-84-007I, PC A04/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with phosgene. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of phosgene in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit phosgene, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for phosgene release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
75-44-5	PHOSGENE

PB86-117603/XAB
Locating and Estimating Air Emissions from Sources of Epichlorohydrin
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 63p, EPA-450/4-85-007J, PC A04/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with epichlorohydrin. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of epichlorohydrin in making gross estimates of air emissions therefrom. This document presents information on 1) the types of sources that may emit epichlorohydrin; 2) process variations and release points that may be expected within these sources; and 3) available emissions information indicating the potential for epichlorohydrin release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
106-89-8	EPICHLOROHYDRIN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
286	INDUSTRIAL ORGANIC CHEMICALS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB86-117611/XAB
Locating and Estimating Air Emissions from Sources of Vinylidene Chloride
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 76p, EPA-450/4-84-007K, PC A05/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with vinylidene chloride. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of vinylidene chloride in making gross estimates of air emissions therefrom. The document presents information on (1) the types of sources that may emit vinylidene chloride, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for vinylidene chloride release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
282	PLASTICS MATERIALS AND SYNTHETICS
2824	ORGANIC FIBERS, NONCELLULOSIC
286	INDUSTRIAL ORGANIC CHEMICALS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS
75-35-4	DICHLOROETHYLENE,1,1-

PB86-119583/XAB
SO2 Emissions in Natural Gas Production Industry: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 141p, EPA-450/3-82-023B

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
7446-09-5	SULFUR DIOXIDE

PB86-120326/XAB
Evaluation of Sampling and Analytical Methodology for Polynuclear Aromatic Compounds in Indoor Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, et al.
Oct 85, 92p, EPA-600/4-85-065, PC A05/MF A01

Abstract: The objective of this project was to develop a generic sampling and analytical methodology to characterize the polynuclear aromatic hydrocarbon (PAH) concentrations in air within various microenvironments. The following three studies were performed: evaluation of analytical methods, design of a sampling method, and design of a pilot study. Two analytical methods, high performance liquid chromatography with ultraviolet adsorption and fluorescence detection and gas chromatography/mass spectrometry, were evaluated for the determination of PAHs and their derivatives in air within microenvironments. The results showed that gas chromatography/positive chemical ionization mass spectrometry with data acquisition in the selected ion monitoring mode is the preferred analytical approach. A modified EPA high volume sampler, consisting of a quartz fiber filter and a polyurethane foam cartridge, is proposed for use in a future experimental study. A literature review was conducted to determine what is known about the contribution of cigarette smoke to the levels of PAHs in air within microenvironments and to evaluate the use of quinoline and isoquinoline as possible marker compounds for the levels of cigarette smoke. A pilot study was designed to assess PAH levels in air found in residences.

CL-IAP INDOOR AIR POLLUTANTS
CL-POM POLYCYCLIC ORGANIC MATTER
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB86-120953/XAB
Comparison of Ambient Air Sampling Techniques for Volatile Organic Compounds
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
M.W. Holdren, B.L. Smith, R.N. Smith
Oct 85, 60p, EPA-600/4-85-067, PC A04/MF A01

Abstract: A series of fourteen experimental sampling runs were carried out at a field site to collect data from several ambient air monitoring methods for volatile organic compounds (VOCs). Ambient air was drawn through a sampling manifold and was continuously spiked with volatile organic compounds to give concentrations 1 to 3 micrograms/L above background air. The spiked compounds were chloroethene, 1,1-dichloroethene, dichloromethane, 3-chloropropene, 1,1,2-trichloro-1,2,2- trifluoroethane, trichloromethane, 1,2-dichloroethane, 1,1,1- trichloroethane, benzene, tetrachloromethane, trichloroethene, toluene, tetrachloroethene, chlorobenzene, and 1,2-dimethylbenzene. Special canisters were utilized to collect whole air, time-integrated samples. An automated gas chromatographic system using capillary column separation and multiple detectors was used for analysis. These samples were analyzed by standard gas chromatographic/mass spectrometric techniques. For Tenax, precision values ranged from 8 to 16 percent.

CL-VOC VOLATILE ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
SS/AM SOURCE SAMP/AMB MON

PB86-123742/XAB
Addendum to the Health Assessment Document for Dichloromethane (Methylene Chloride) Updated Carcinogenicity Assessment of Dichloromethane (Methylene Chloride)
EPA, Washington, DC, OHEA
D.V. Singh, H.L. Spitzer, P.D. White
Sep 85, 124p, EPA-600/8-82-004FF, PC A06/MF A01

Abstract: The addendum contains a review of the data from the latest National Toxicology Program (NTP) inhalation bioassay of dichloromethane (DCM) and an update of the inhalation cancer risk value. In addition, there is a recommendation for an estimate of unit risk for ingestion exposure, and an evaluation of metabolism and pharmacokinetic data for use in the development of cancer unit risk estimates. The recent NTP inhalation bioassay concluded that there was some evidence of carcinogenicity for male F344/N rats and clear evidence of carcinogenicity for female F344/N rats as shown by increased evidence of benign neoplasms of the mammary gland. There was clear evidence of carcinogenicity for male and female B6C3F1 mice as shown by increased incidence of alveolar/bronchiolar neoplasms and of hepatocellular neoplasms. A review of the metabolism/ pharmacokinetics concluded that possible approaches for interpreting the data are more illustrative than useful in risk estimation. Using EPA's Proposed Guidelines for Carcinogen Risk Assessment, there is a sufficient weight-of-evidence that DCM is a possible carcinogen in experimental animals, but for humans the data are inadequate. Therefore, DCM is classified as Category B2, i.e., a possible human carcinogen.

CL-SOLVENT	SOLVENTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-09-2	METHYLENE CHLORIDE

PB86-125507/XAB
Mutagenicity and Carcinogenicity Assessment of 1,3-Butadiene
EPA, Washington, DC, OHEA
S. Bayard, et al.
Sep 85, 139p, EPA-600/8-85-004F, PC A07/MF A01

Abstract: 1,3-Butadiene has been shown to be an indirect mutage in bacteria. Two of its potential metabolites, 3,4-epoxybutene and diepoxybutane, are genotoxic in prokaryote as well as eukaryote test systems. Exposure of rodents to 1,3-butadiene results in ovarian tumors in mice and testicular tumors in rats, which offers suggestive evidence that 1,3-butadiene (or a metabolite of 1,3-butadiene) may reach the germ cells. There is also evidence that the dimer of 1,3-butadiene, 4-vinyl- 1-cyclohexene, causes ovarian tumors in mice. The total body of evidence, including metabolism, mutagenicity and carcinogenicity data, suggests that 1,3-butadiene may present a genetic risk to humans. However, mutagenicity studies in mammalian test systems should be conducted to further characterize the mutagenic potential of 1,3- butadiene. On the basis of sufficient evidence from studies in two species of rodents, and inadequate epidemiologic data, 1,3-butadiene can be classified, according to EPA's Proposed Guidelines for Carcinogen Risk Assessment, as a 'probable' human carcinogen, Group B2. Using the classification scheme of the International Agency for Research on Cancer, 1,3-butadiene would be classified as a 'probable' human carcinogen, Group 2B.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
106-99-0	BUTADIENE,1,3-
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
283	DRUGS
2833	MEDICINALS AND BOTANICALS
2834	PHARMACEUTICAL PREPARATIONS
30	RUBBER AND MISC. PLASTICS PRODUCTS

PB86-126448/XAB
Second Review of New Source Performance Standards for Asphalt Concrete Plants
EPA, Research Triangle Park, NC, OAQPS
Oct 85, 146p, EPA-450/3-85-024, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMAN
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3272	CONCRETE PRODUCTS, NEC
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3531	CONSTRUCTION MACHINERY

PB86-129566/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Acetonitrile
National Cancer Institute
Jul 85, 27p, SRC-TR-84-692, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-05-8	ACETONITRILE

PB86-130069/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Hydroquinone
National Cancer Institute
Jul 85, 34p, SRC-TR-1042, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
123-31-9	HYDROQUINONE

PB86-130333/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Vinylidene Chloride
National Cancer Institute
Jul 85, 39p, SRC-TR-84-632, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-35-4	DICHLOROETHYLENE,1,1-

PB86-131414/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,4-Dioxane
National Cancer Institute
Jul 85, 32p, SRC-TR-84-659, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
123-91-1	DIOXANE,1,4-

PB86-131422/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Ethylene Glycol Ethers
National Cancer Institute
Jul 85, 42p, SRC-TR-84-1039, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
109-86-4	METHOXYETHANOL,2-
110-80-5	ETHOXYETHANOL,2-

PB86-132073/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Glycidyl Ethers
National Cancer Institute
Jul 85, 36p, SRC-TR-84-1044, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
122-60-1	PHENYL GLYCIDYL ETHER

PB86-133162/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Ethylene Dibromide (EDB)
National Cancer Institute
Jul 85, 53p, SRC-TR-84-622, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
106-93-4	ETHYLENE DIBROMIDE

PB86-135126/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Phosgene
National Cancer Institute
Jul 85, 32p, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-44-5	PHOSGENE

PB86-135571/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Diethyl Sulfate
National Cancer Institute
Jul 85, 24p, SRC-TR-84-1032, PC A02/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
64-67-5	DIETHYL SULFATE

PB86-135753/XAB
Proceedings of the NCI/EPA/NIOSH Collaborative Workshop (3rd): Progress on Joint Environmental and Occupational Cancer Studies Held at Bethesda, Maryland on March 22-23, 1984
National Cancer Institute
Mar 84, 723p, PC A99/MF E04

Abstract: A collaborate and exchange program on Environmental and Occupational Cancer Studies supported by the Cancer Institute under an interagency agreement with EPA & NIOSH.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB86-136587/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Aziridine
National Cancer Institute
Jul 85, 23p, SRC-TR-84-740, PC A02/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
151-56-4	ETHYLENEIMINE

PB86-136595/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Amitrole
National Cancer Institute
Jul 85, 26p, SRC-TR-84-747, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
61-82-5	AMINOTRIAZOLE,3-,1,2,4-

PB86-142080/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Cresols
National Cancer Institute
Jul 85, 30p, SRC-TR-84-973, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
1319-77-3	CRESOL (ALL ISOMERS)

PB86-143344/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Benzyl Chloride
National Cancer Institute
Jul 85, 33p, SRC-TR-84-747, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE
100-44-7 BENZYL CHLORIDE

PB86-143351/XAB
Monograph on the Potential Carcinogenic Risk to Humans: Turpentine
National Cancer Institute
Jul 85, 30p, SRC-TR-84-1123, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE
8006-64-2 TURPENTINE

PB86-143369/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 4,4-Methylenedianiline
National Cancer Institute
Jul 85, 34p, SRC-TR-84-1048, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
101-77-9	METHYLENEDIANILINE,4,4'-

PB86-143377/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Carbon Tetrachloride
National Cancer Institute
Jul 85, 45p, SRC-TR-84-1123, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
56-23-5	CARBON TETRACHLORIDE

PB86-143385/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Pyridine
National Cancer Institute
Jul 85, 35p, SRC-TR-84-1119, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
110-86-1	PYRIDINE

PB86-143393/XAB
Monograph on the Potential Carcinogenic Risk to Humans: Nitropropanes
National Cancer Institute
Jul 85, 31p, SRC-TR-84-1047, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
79-46-9	NITROPROPANE,2-

PB86-143401/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Isopropyl Alcohol
National Cancer Institute
Jul 85, 29p, SRC-TR-84-1043, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
67-63-0	ISOPROPANOL

PB86-143419/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Gasoline
National Cancer Institute
Jul 85, 35p, SRC-TR-84-1041, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
8006-61-9	GASOLINE

PB86-143427/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Carbaryl National Cancer Institute
Jul 85, 38p, SRC-TR-84-972, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
63-25-2	CARBARYL

PB86-143435/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Epichlorohydrin National Cancer Institute
Jul 85, 49p, SRC-TR-84-631, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
106-89-8	EPICHLOROHYDRIN

PB86-143443/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Diazinon
National Cancer Institute
Jul 85, 32p, SRC-TR-84-1030, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
333-41-5	DIAZINON

PB86-143450/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Diphenyl
National Cancer Institute
Jul 85, 38p, SRC-TR-84-158, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
92-52-4	BIPHENYL

PB86-143468/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 2,4-Dinitrotoluene
National Cancer Institute
Jul 85, 38p, SRC-TR-84-1053, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
121-14-2	DINITROTOLUENE,2,4-

PB86-143476/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Carbon Disulfide
National Cancer Institute
Jul 85, 39p, SRC-TR-84-986, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-15-0	CARBON DISULFIDE

PB86-143492/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,2-Dichloropropane
National Cancer Institute
Jul 85, 32p, SRC-TR-84-972, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
78-87-5	DICHLOROPROPANE,1,2-

PB86-143500/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Dimethylformamide
National Cancer Institute
Jul 85, 24p, SRC-TR-84-1029, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
68-12-2	DIMETHYLFORMAMIDE,N,N-

PB86-143518/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Arsine
National Cancer Institute
Jul 85, 34p, SRC-TR-84-728, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7784-42-1	ARSINE

PB86-143526/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 2,6-Dichloro-4-Nitroaniline
National Cancer Institute
Jul 85, 26p, SRC-TR-84-987, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
99-30-9	DICHLORAN

PB86-143534/XAB
Monograph on the Potential Carcinogenic Risk to Humans: Paraquat
National Cancer Institute
Jul 85, 27p, SRC-TR-84-1052, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
1910-42-5	PARAQUAT
4685-14-7	DIMETHYL-4,4-BIPYRIDINIUM,1,1-

PB86-143542/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Acrolein
National Cancer Institute
Jul 85, 34p, SRC-TR-84-691, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-02-8	ACROLEIN

PB86-143559/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Ethylene Oxide
National Cancer Institute
Jul 85, 57p, SRC-TR-84-668, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-21-8	ETHYLENE OXIDE

PB86-144615/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Aniline
National Cancer Institute
Jul 85, 38p, SRC-TR-84-729, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
62-53-3	ANILINE

PB86-144698/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Toluene
National Cancer Institute
Jul 85, 53p, SRC-TR-84-1121, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
108-88-3	TOLUENE

PB86-145919/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Acrylonitrile
National Cancer Institute
Jul 85, 71p, SRC-TR-85-192, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-13-1	ACRYLONITRILE

PB86-147212/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,2-Dichloroethane
National Cancer Institute
Jul 85, 47p, SRC-TR-84-655, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-06-2	ETHYLENE DICHLORIDE

PB86-147220/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Trichloroethylene
National Cancer Institute
Jul 85, 52p, SRC-TR-84-637, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
79-01-6	TRICHLOROETHYLENE

PB86-147238/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Tetrachloroethylene
National Cancer Institute
Jul 85, 47p, SRC-TR-84-629, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
127-18-4	TETRACHLOROETHYLENE

PB86-147246/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Malathion
National Cancer Institute
Jul 85, 37p, SRC-TR-84-1049, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
121-75-5	MALATHION

PB86-147253/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Pentachloronitrobenzene
National Cancer Institute
Jul 85, 28p, SRC-TR-84-1056, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
82-68-8	PENTACHLORONITROBENZENE

PB86-147261/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,3-Butadiene
National Cancer Institute
Jul 85, 53p, SRC-TR-84-639, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
106-99-0	BUTADIENE,1,3-

PB86-147279/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Chloroform
National Cancer Institute
Jul 85, 42p, SRC-TR-84-650, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
67-66-3	CHLOROFORM

PB86-147287/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Lead
National Cancer Institute
Jul 85, 51p, SRC-TR-84-1034, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7439-92-1	LEAD POWDER

PB86-147295/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Nitroanilines
National Cancer Institute
Jul 85, 28p, SRC-TR-84-1046, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
100-01-6	NITROANILINE,P-
88-74-4	NITROANILINE,O-

PB86-147303/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Creosote
National Cancer Institute
Jul 85, 42p, SRC-TR-85-182, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
8021-39-4	CREOSOTE

PB86-147311/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Parathion
National Cancer Institute
Jul 85, 40p, SRC-TR-84-1054, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
56-38-2	PARATHION

PB86-147329/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Lindane
National Cancer Institute
Jul 85, 37p, SRC-TR-84-1045, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
58-89-9	GAMMA-HEXACHLORO-CYCLOHEXANE

PB86-147337/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Nickel
National Cancer Institute
Jul 85, 49p, SRC-TR-84-673, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7440-02-0	NICKEL

PB86-148343/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Dichlorvos
National Cancer Institute
Jul 85, 31p, SRC-TR-84-1037, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
62-73-7	VAPONA

PB86-148350/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Methylene Chloride
National Cancer Institute
Jul 85, 49p, SRC-TR-84-1048, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-09-2	METHYLENE CHLORIDE

PB86-148368/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Chromic Acid
National Cancer Institute
Jul 85, 42p, SRC-TR-84-675, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7738-94-5	CHROMIC ACID

PB86-171527
Emission Factors for Equipment Leaks of VOC and HAP
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
J.H.E. Stelling III
Feb 86, 70p, EPA-450/3-86-002, PC A04/MF A01

Abstract: The report summarizes the development of emission factors for volatile organic compound (VOC) equipment leaks. The background information used in emission factor development is reviewed. The estimation techniques for generation of VOC emission factors are described and illustrated with an example. The application of the estimation techniques is demonstrated for both VOC and hazardous air pollutants (HAPs).

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-181179/AS
Air Toxics Information Clearinghouse: Rationale for Air Toxics Control in Seven State and Local Agencies
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
A.S. Pelland, P.A. Cruse
Dec 85, 100p, EPA-450/5-86-005, PC A06/MF A01

Abstract: This report describes the approach used by four State and three local agencies for determining acceptable ambient concentrations and, if applicable, emission limits for noncriteria air pollutants. The agencies included are located in: Chattanooga/Hamilton County (Tennessee), Connecticut, Maine, Mississippi, Nevada, Philadelphia (Pennsylvania), and Sacramento County (California).

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-181690/AS
Air Toxics Information Clearinghouse: Ongoing Research and Regulatory Development Projects
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
R.C. Mead, C.E. Benton, A.S. Pelland
Mar 85, 81p, EPA-450/5-86-004, PC A05/MF A01

Abstract: The purpose of this document, published by the Air Toxics Information Clearinghouse, is to inform state and local policy makers of current research and regulatory development projects underway at EPA and the National Institute of Occupational Safety and Health (NIOSH), and to help them identify sources of specific air toxics information. Every effort has been made to ensure accuracy as of December 1984, the date that compilation of information was completed. However, Agency policies, priorities, and funding levels reflected by the projects listed in this document may change affecting estimated project completion dates and whether or not regulatory actions are finally taken.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PUB-ON-DEMAND-1
A Study of Herbicides and Birth Defects in the Republic of Vietnam
National Academy of Sciences
1982, 77 p., $11.50

Abstract Not Available

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PUB-ON-DEMAND-2
Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents, Vol 2: Cholinesterase Reactivators, Psychochemicals and Irritants and Vesicants
National Academy of Sciences
1984, 351p, $28.00

Abstract: No abstract available.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY

PUB-ON-DEMAND-3
Risk Assessment in the Federal Government: Managing the Process Working Papers
National Academy of Sciences
1983, 128p, $14.50

Abstract: This volume contains the collected working papers of the Committee on the Institutional Means for Assessment of Risks to Public Health. It is a companion volume to Risk Assessment in the Federal Government: Managing the Process. See ISBN 0-309-03349-7.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

36 FR 23239 12-07-71
National Emission Standards for Hazardous Air Pollutants, Proposed Standards for Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule. This document announces inclusion of asbestos, beryllium and mercury in the list of hazardous air pollutants, describes emission sources and control options available for each pollutant, and defines appropriate test methods and procedures for sampling.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
161	HIGHWAY AND STREET CONSTRUCTION
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
359	MISC. MACHINERY, EXCEPT ELECTRICAL
3599	MACHINERY, EXCEPT ELECTRICAL, NEC
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

38 FR 8820 04-06-73
National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. This notice summarizes the bases for the Administrator's determinations that asbestos, beryllium, and mercury are hazardous. It explains the derivations of the standards now adopted, the Environmental Protection Agency's responses to the significant comments received, and the principal revisions to the proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
161	HIGHWAY AND STREET CONSTRUCTION
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
359	MISC. MACHINERY, EXCEPT ELECTRICAL
3599	MACHINERY, EXCEPT ELECTRICAL, NEC
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

39 FR 15396 05-03-74
National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Promulgation of revisions to the standards. These revisions include the clarification of various definitions used in the standard, such as 'alternative method', 'commercial asbestos', 'asbestos mill', 'manufacturing', and 'demolition'. The time allowed to notify the Administrator prior to beginning demolition is changed from 20 to 10 days. It is not necessary to remove friable asbestos from supporting structrial members. A clarification is added to make the no-visible-emissions regulation consistent with other similar regulations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
1332-21-4	ASBESTOS
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

39 FR 38064 10-25-74
Asbestos and Mercury, Proposed Amendments to National Emission Standards for Hazardous Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed amendments to the standards for asbestos and mercury. These amendments include the addition of the manufacture of both shotgun shells and asphalt concrete as major sources of asbestos and the addition of sewage sludge drying or incineration as a major source of mercury. The notice also proposes amendments to Appendix B, Test Methods.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

40 FR 48299 10-14-75
National Emission Standards for Hazardous Air Pollutants, Amendments to Standards for Asbestos and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Promulgation of the proposed standards as amended. This notice summarizes principal changes to the proposed amendments and the Agency's responses to the major comments received.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
7439-97-6	MERCURY

40 FR 59532 12-24-75
National Emission Standards for Hazardous Air Pollutants, Proposed Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule. The proposed national emission standard covers vinyl chloride emissions from ethylene dichloride-vinyl chloride and polyvinyl chloride plants. The notice describes the rationale for regulating vinyl chloride under the authority of Section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

41 FR 19585 05-12-76
Phosphate Fertilizer Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Draft guideline document availability. This notice announces availability of a draft guideline document for the control of atmospheric fluoride emissions from existing phosphate fertilizer plants and invites public comments on the contents of the document. The notice announces the Administrator's determination that fluoride emissions are a welfare-related, rather that a health-related, pollutant.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS

41 FR 46561 10-21-76
National Emission Standards for Hazardous Air Pollutants, Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. In ethylene dichloride-vinyl chloride plants, the standard limits vinyl chloride emissions from the ethylene dichloride and vinyl chloride formation and purification processes to 10 ppm. For the oxychlorination process, vinyl chloride emissions are limited to 0.2 g/kg of ethylene dichloride product.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

41 FR 48706 11-04-76
Standards of Performance for New Stationary Sources, Emission Guidelines for the Control of Sulfuric Acid Mist from Existing Sulfuric Acid Production Units
EPA, Research Triangle Park, NC, OAQPS

Abstract: Draft guideline document availability. The purpose of this notice is to propose emission guidelines and times for compliance for the control of sulfuric acid mist emissions from existing sulfuric acid production units, and to announce the publication of a draft guideline document concerning the control of sulfuric acid mist emissions from such units. The notice announces the Administrator's determination that sulfuric acid mist is a health-related pollutant.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

42 FR 12022 03-01-77
Phosphate Fertilizer Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final guideline document availability. This notice announces availability of the final guideline document for the control of atmospheric fluoride emissions from existing phosphate fertilizer plants. This action triggers the development of state plans to control fluoride emissions from existing phosphate fertilizer facilities under Section 111(d) of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS

42 FR 12122 03-02-77
National Emission Standard for Hazardous Air Pollutants, Proposed Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed amendments. This notice lists the reasons EPA is proposing to prohibit the spraying of all materials which contain asbestos in excess of one percent by weight on buildings, structures, structural members, pipes, and conduits. This prohibition includes spray-on application of paints, decorative sprays, and weather-roofing. An amendment is also being proposed which would extend the coverage of the demolition and renovation provisions to include the proper removal of all friable materials which contain in excess of one percent asbestos prior to renovation or demolition of buildings, structures, facilities, or installations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK

42 FR 28154 06-02-77
National Emission Standards for Hazardous Air Pollutants: Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule. This notice includes proposed amendments to the vinyl chloride standard, applying to new and existing ethylene dichloridevinyl chloride and polyvinyl chloride plants. The intended effect of the proposed amendments is to require improved effectiveness of control technology at existing plants, to impose more stringent emission limits on new sources, and to prohibit an emission increase within the vicinity of an existing source due to the construction of a new source.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

42 FR 55796 10-18-77
Standards of Performance for New Stationary Sources, Emission Guideline for Sulfuric Acid Mist
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final guideline document availability. This action establishes emission guidelines and times for compliance and control of sulfuric acid mist from existing sulfuric acid plants. Section 111(d) of the Clean Air Act requires States to control emissions of designated pollutants from existing sources, and this rulemaking initiates the States' action and provides them with guidelines acceptable by EPA.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NSPS	NEW SOURCE PERFORMAN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

43 FR 7597 02-23-78
Kraft Pulp Mills, Draft Guideline Document: Availability
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of availability of draft guideline document. This action announces availability of a draft guideline document to control total reduced sulfur (TRS) emissions from existing kraft pulp mills and invites public comments on the contents of the document. This notice announces the Administrator's determination that TRS emissions are to be considered a welfare-related pollutant, giving States greater flexibility in developing their plans than would be the case if public health were affected.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS
7704-34-9	SULFUR

43 FR 26372 06-19-78
National Emission Standards for Hazardous Air Pollutants, Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. This rule amends the national emission standard for asbestos by extending the requirements of the provisions which apply to the spraying of asbestos-containing materials and to demolition and renovation operations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK

44 FR 21754 04-11-79
Primary Aluminum Plants; Draft Guideline Document; Availability
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of availability of draft guideline document. This notice announces availability of a draft guideline document for the control of fluoride emissions from existing primary aluminum reduction plants and invites public comment on the document. This notice announces the Administrator's determination that fluoride emissions are to be considered a welfare-related pollutant, giving States greater flexibility in developing their plans than would be the case if public health were affected.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING

44 FR 29828 05-22-79
Kraft Pulp Mills, Final Guideline Document; Availability
EPA, Research Triangle Park, NC, OAQPS

Abstract: Under the authority of Section 111(d) of the Clean Air Act, this action establishes emission guidelines and compliance times for State agencies to use in establishing standards of performance to control total reduced sulfur (TRS) emissions from existing kraft pulp mills.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
261	PULP MILLS
2611	PULP MILLS
7704-34-9	SULFUR

45 FR 26294 04-17-80
Primary Aluminum Plants; Availability of Final Guideline Document
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of availability of final guideline document. Under the authority of Section 111(d) of the Clean Air Act, this action establishes emission guidelines and compliance times for State agencies to use in establishing standards of performance to control fluoride emissions from existing primary aluminum plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING

45 FR 26660 04-18-80
National Emission Standard for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from maleic anhydride plants. Emissions from existing sources would have to be reduced to 0.30 kilogram of benzene per 100 kilograms of benzene fed to the reactor. No detectable benzene emissions would be allowed from new sources. A new Test Method 110 is proposed for the determination of benzene emissions from stationary sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

45 FR 83448 12-18-80
National Emissions Standards for Hazardous Air Pollutants; Benzene Emissions from Ethylbenzene/Styrene Plants; Public Hearing.
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from process vents at existing and new ethylbenzene and styrene (EB/S) plants to five parts per million by volume (ppmv) on a dry basis corrected to three percent oxygen.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

45 FR 83952 12-19-80
Benzene Emissions from Benzene Storage Vessels; National Emission Standard for Hazardous Air Pollutants; Hearing
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from each new and existing storage vessel with a capacity greater than 4 cubic meters used to store pure benzene. The notice describes proposed requirements for fixed/floating roofs, primary and secondary seals, and inspection procedures.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

46 FR 1165 01-05-81
National Emission Standard for Hazardous Air Pollutants; Benzene Fugitive Emissions
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed emission sources containing 10 or more percent by weight benzene in the petroleum refining and chemical manufacturing industries. The proposed standard would allow no detectable emissions due to leaks from safety/relief valves and product accumulator vessels; would require a leak detection and repair program for pipeline valves and existing pumps and compressors; and would require certain equipment for new pumps, new compressors, sampling connections and open-ended valves.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

47 FR 53059 11-24-82
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Benzene Storage Vessels
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of additional emissions test data. This notice announces the receipt of additional emissions test data for evaluation and inclusion in the project docket for the benzene storage vessel national emission standards for hazardous air pollutants (NESHAP). The American Petroleum Institute (API) has completed an internal floating roof emissions testing program that provides new technical data for the evaluation of available control technologies.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

48 FR 15076 04-06-83
National Emission Standards for Hazardous Air Pollutants; Standards for Radionuclides
EPA, Washington, DC, ORP

Abstract: Pursuant to Section 112, EPA is proposing standards (including appropriate reporting requirements) for sources of emissions of radionuclides in four categories: (1) Department of Energy (DOE) Facilities, (2) Nuclear Regulatory Commission (NRC) licensed facilities and non-DOE Federal facilities, (3) underground uranium mines, and (4) elemental phosphorous plants. The Environmental Protection Agency (EPA) has identified several additional source categories that emit radionuclides and has determined there are good reasons for not proposing standards at this time for these categories. They are the following: (1) coal-fired boilers, (2) the phosphate industry, (3) other extraction industries, (4) uranium fuel cycle facilities, uranium mill tailings, management of high level waste, and (5) low energy accelerators.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
73	BUSINESS SERVICES

48 FR 32126 07-13-83
National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. These proposed amendments to the national emission standard for asbestos would reinstate work practice and equipment provisions of the standard that were held not to be emission standards by the Supreme Court in 1978.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK

48 FR 33112 07-20-83
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Arsenic: Proposed rule and announcement of public hearing. In this notice, EPA is proposing standards for certain source categories of inorganic arsenic emissions to the ambient air and is proposing not to regulate others. Pursuant to Section 112, EPA is proposing standards for the following categories of sources of emissions of inorganic arsenic: high-arsenic primary copper smelters, low-arsenic primary copper smelters, and glass manufacturing plants. EPA identified other categories of sources emitting inorganic arsenic; and, after careful study, determined that the proposal of standards for these categories of sources is not warranted at this time. These categories of sources are primary lead smelters, secondary lead smelters, primary zinc smelters, zinc oxide plants, cotton gins, and arsenic chemical manufacturing plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT
7440-38-2	ARSENIC

48 FR 55880 12-16-83
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Reopening of public comment period. The period for receiving written comments on the proposed national emission standards for inorganic arsenic is being reopened. EPA is extending the public comment period in response to several requests to do so.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT
7440-38-2	ARSENIC

49 FR 5580 02-13-84
Air Pollution Control; Regulation of Polycyclic Organic Matter Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed decision and opportunity for public hearing. This notice announces the results of EPA's assessment of polycyclic organic matter as a potentially toxic air pollutant. It announces the Agency's purposed decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES

49 FR 8386 03-06-84
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, and Benzene Storage Vessels; Proposed Withdrawal of Proposed Standards
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposal to withdraw proposed standards. This notice proposes to withdraw the proposed standards for benzene emissions from these source categories for the reason that both the benzene health risks (annual leukemia incidence and maximum lifetime risk) to the public from these source categories and the potential reduction in health risks achievable with available control techniques are too small to warrant federal regulatory action under Section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

49 FR 10278 03-20-84
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of reopening of public comment period and request for comments. This notice announces reopening of public comment period for proposed national emission standards for inorganic arsenic used in glass manufacturing plants. Data received since proposal of the standard indicate that more vapor phase inorganic arsenic emissions may be occurring from furnaces producing soda-lime glass than from furnaces producing other types of glass. EPA is requesting comments on three regulatory options for soda-lime furnaces. EPA is also soliciting comments on a possible revision to the zero production rate offsets.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT
7440-38-2	ARSENIC

49 FR 13658 04-05-84
National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. This action promulgates amendments proposed July 13, 1983, intended to reinstate work practice and equipment provisions of the standard that were held not to be emission standards by the U.S. Supreme Court in 1978.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
161	HIGHWAY AND STREET CONSTRUCTION
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS

49 FR 22195 05-25-84
Assessment of Toluene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate. This notice describes the results of EPA's assessment of toluene as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
108-88-3	TOLUENE

49 FR 23478 06-06-84
National Emission Standards for Hazardous Air Pollutants; Regulation of Benzene
EPA, Research Triangle Park, NC, OAQPS

Abstract: Response to public comments. This notice responds to public comments on the listing, health effects, and regulation of benzene as a hazardous air pollutant.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

49 FR 23498 06-06-84
National Emission Standards for Hazardous Air Pollutants; Benzene Equipment Leaks (Fugitive Emission Sources)
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. The EPA listed benzene as a hazardous air pollutant under section 112 of the Clean Air Act on June 8, 1977. A standard was subsequently proposed for benzene fugitive emission sources (January 5, 1981). This notice responds to comments on and promulgates the standards for benzene fugitive emission sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
71-43-2	BENZENE

49 FR 23522 06-06-84
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Benzene Emissions from Coke By-Product Recovery Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from new and existing sources in coke by-product recovery plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
49	ELECTRIC, GAS, AND SANITARY SERVICES
492	GAS PRODUCTION AND DISTRIBUTION
4925	GAS PRODUCTION AND/OR DISTRIBUTION
71-43-2	BENZENE

49 FR 23558 06-06-84
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, and Benzene Storage Vessels
EPA, Research Triangle Park, NC, OAQPS

Abstract: Withdrawal of proposed standards. This notice responds to public comments on the proposed withdrawal of the proposed standards, and announce the EPA's final action to withdraw the proposed standards for benzene emissions from maleic anhydride process vents, ethylbenzene/stryene process vents, and benzene storage vessels. This decision is based on the conclusion that both benzene health risks to the public and potential reductions in health risks achieveable with available control techniques are too small to warrant federal regulatory action under section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

49 FR 31680 08-08-84
Air Pollution Control; Regulation of Polycyclic Organic Matter Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final decision. This notice announces the results of EPA's assessment of polycyclic organic matter as a potentially toxic air pollutant. It announces the Agency's final decision not to regulate based on the finding's that ambient air concentrations do not pose a singificant risk to public health.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES

49 FR 33904 08-27-84
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Benzene Emissions from Coke By-Product Recovery Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Repoening of the public comment period. In response to requests from two trade associations, the period for receiving written comments on the proposed national emission standard for benzene emissions from coke by-product recovery plants is being reopened. Comments must be postmarked on or before October 19, 1984.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
71-43-2	BENZENE

49 FR 36560 09-18-84
National Emission Standards for Hazardous Air Pollutants: Addition of Coke Oven Emissions to List of Hazardous Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Addition to the list of hazardous air pollutants. This notice announces the Administrator's decision to list coke oven emissions as a hazardous air pollutant under section 112 of the Clean Air Act. This decision is based on findings that coke oven emissions pose a significant risk to the public.

CL-COE	COKE OVEN EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

49 FR 36877 09-20-84
National Emission Standards for Hazardous Air Pollutants Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule; reopening of public comment period on new information. The period for receiving written comments on the prosposed national emission standards for inorganic arsenic emissions from low-arsenic throughput primary copper smelters is being reopened. Comments must be postmarked on or before November 5, 1984. This action is for the limited purpose of allowing comment on EPA's analyses of new information concerning arsenic emissions and control cost for low-arsenic throughput primary copper smelters.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
7440-38-2	ARSENIC

49 FR 43906 10-31-84
National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
EPA, Research Triangle Park, NC, ORP

Abstract: Withdrawal of proposed standards. The Agency announces withdrawal of its four standards for radionuclide emissions, effective Oct. 31, 1984.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
73	BUSINESS SERVICES

49 FR 43915 10-31-84
National Emission Standards for Hazardous Air Pollutants; Standards for Radon-222 Emissions from Underground Uranium Mines
EPA, Research Triangle Park, NC, ORP

Abstract: Advance notice of proposed rulemaking. The agency announces its intent to start a program to consider a standard based on bulkheading or related techniques to control radon emissions from underground uranium mines. This standard could be an emission standard, or a design, equipment, work practice, or operational standard, or a combination thereof.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

49 FR 43916 10-31-84
National Emission Standards for Hazardous Air Pollutants; Standards for Radon-222 Emissions from Licensed Uranium Mills
EPA, Washington, DC, ORP

Abstract: Advance notice of proposed rulemaking. The Agency announces its intent to consider development of standards to control radon-222 emissions from licensed uranium mills.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
NESHAP	NATIONAL EMISSION ST
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

49 FR 46294 11-23-84
Proposed Guidelines for Carcinogen Risk Assessment
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for carcinogen risk assessment and request for comments. This is the first revision of the 1976 Interim Procedures and Guidelines for Health Risk Assessments of Suspected Carcinogens (U.S. EPA, 1976; Albert et al., 1977). These guidelines describe the general framework to be followed in developing an analysis of carcinogenic risk and some salient principles to be used in evaluating the quality of data and in formulating judgments concerning the nature and magnitude of the cancer hazard from suspect carcinogens.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
RA	RISK ASSESSMENT

49 FR 46304 11-23-84
Proposed Guidelines for Exposure Assessment
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for exposure assessment and request for comments. These guidelines provide the Agency with a general approach and framework for carrying out human or nonhuman exposure assessments for specified pollutants.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES

49 FR 46314 11-23-84
Proposed Guidelines for Mutagenicity Risk Assessment
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for mutagenicity risk assessment and request for comments. The current proposed guidelines address the comments received in response to the Agency's proposed mutagenicity risk assessment guidelines and provide the basis for the Agency's risk assessments for mutagenicity. The guidelines adopt the general approach set forth in the 1980 proposal, but reflect additional changes made in response to the comments and to new scientific information generated since the time of the proposal.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
RA	RISK ASSESSMENT

49 FR 46324 11-23-84
Proposed Guidelines for the Health Assessment of Suspect Developmental Toxicants
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for the health assessment of suspect developmental toxicants and requests for comments. These guidelines describe the procedures that EPA will follow in evaluating potential developmental toxicity associated with human exposure to environmental toxicants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
HA	HEALTH ASSESSMENT

49 FR 50146 12-26-84
National Emission Standard for Hazardous Air Pollutants Review and Proposed Revision of the Standards for Mercury from Mercury-Cell Chlor-Alkali Plants, Swilge Incineration and Drying Plants, and Mercury Ore Processing Facilities
EPA, Research Triangle Park, NC, OAQPS

Abstract: Review and proposed rule. This notice summarizes the information gathered during the review of the mercury NESHAP and proposes the addition of monitoring and reporting requirements to the standard for mercury-cell chlor-alkali plants. It also proposes to allow the owner or operator of an affected facility 15 days to verify the validity of source test data prior to reporting the results to the Administrator.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

50 FR 1182 01-09-85
National Emission Standards for Hazardous Air Pollutants; Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. This action proposes administrative and clarifying revisions to the standard and announce decisions pertaining to other aspects of the current standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
75-01-4	VINYL CHLORIDE

50 FR 14941 04-16-85
Equipment Leaks of VOC From Synthetic Organic Chemical Manufacturing Industry; Petroleum Refineries; Equipment Leaks of Benzene; Benzene Emissions from Coke By-Product Recovery Plants; Distillation Unit Operations; Volatile Organic Liquid Storage Vessels; and General Provisions
EPA, Research Triangle Park, NC, OAQPS

Abstract: Grant of petition for reconsideration of proposed rules. The EPA is granting a petition for reconsideration of one aspect of the standards of performance for equipment leaks of volatile organic compounds (VOC) in the synthetic organic chemical manufacturing industry (SOCMI). EPA is proposing a change in the exit velocity limits for flares covered by these standards and several others. This proposal is based on new data on flare performance.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
71-43-2	BENZENE

50 FR 24313 06-10-85
Assessment of Chlorofluorocarbon-113 as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, OAQPS

Abstract: Notice of intent not to regulate chlorofluorocarbon-113 under the Clean Air Act. This notice announces the results of EPA's assessment of chlorofluorocarbon-113 as a potentially toxic air pollutant. The Agency has determined that available information on the health effects from emissions into the atmosphere is not sufficient to warrant regulation at this time. The findings of an on-going EPA study of the effect of trace gases on stratospheric ozone may lead to a reassessment of this decision and could result in the regulation of chlorofluorocarbon-113 under a variety of authorities, including section 157 of the Clean Air Act.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
76-13-1 TRICHLOROTRIFLUOROMETHANE,1,1,2-

50 FR 24314 06-10-85
Assessment of Methyl Chloroform as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of methyl chloroform as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
74-87-3 METHYL CHLORIDE

J FR 24317 06-10-85
Intent to List Chromium or Hexavalent Chromium as a Hazardous Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of chromium or hexavalent chromium as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add chromium or hexavalent chromium to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
7440-47-3 CHROMIUM

50 FR 24319 06-10-85
Pilot Program on Acrylonitrile
EPA, Research Triangle Park, NC, OAQPS

Abstract: Announcement of pilot program. This notice describes the results of the Agency's analysis of acrylonitrile as a toxic air pollutant and announces a Pilot Program to negotiate with State and local air pollution control agencies to further analyze emitting sources to determine if additional controls are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
107-13-1 ACRYLONITRILE

50 FR 24575 06-11-85
Assessment of Epichlorohydrin as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate epichlorohydrin under the Clean Air Act. This notice describes the results of EPA's assessment of epichlorohydrin as a potentially toxic air pollutant. It announces the decision not to regulate based on the findings that present ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
106-89-8	EPICHLOROHYDRIN

50 FR 32621 08-13-85
Assessment of Carbon Tetrachloride as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of carbon tetrachloride as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add carbon tetrachloride to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
56-23-5	CARBON TETRACHLORIDE

50 FR 32627 08-13-85
Decision Not To Regulate Manganese Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of manganese as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
7439-96-5	MANGANESE

50 FR 32628 08-13-85
Air Pollution Control; Assessment of Chlorinated Benzenes as Potentially Toxic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate chlorinated benzenes under the Clean Air Act. The EPA has concluded that the health risk from ambient exposure to any of the chlorinated benzene compounds, including hexachlorobenzene, is not sufficient to warrant regulation at this time.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
108-90-7	MONOCHLOROBENZENE
118-74-1	HEXACHLOROBENZENE

50 FR 32632 08-13-85
Air Pollution Control; Decision Not to Regulate Vinylidene Chloride and Solicitation of Information
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of vinylidene chloride as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
75-35-4	DICHLOROETHYLENE,1,1-

50 FR 34144 08-23-85
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, and Benzene Equipment Leaks
EPA, Research Triangle Park, NC, OAQPS

Abstract: Denial of petition for reconsideration. The administrator finds that the objections raised by the Natural Resources Defense Council do not provide substantial support for revising the decisions. Also, many of the objections could have been raised during the original rulemaking.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

50 FR 39626 09-27-85
Intent to List Chloroform as a Hazardous Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of chloroform as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add chloroform to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
67-66-3	CHLOROFORM

50 FR 39632 09-27-85
Assessment of Chloroprene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice describes the results of EPA's assessment of chloroprene as a potentially toxic air pollutant and announces EPA's intent not to regulate chloroprene at this time.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
126-99-8	CHLOROBUTADIENE,2-,1,3-

50 FR 40154 10-01-85
Assessment of Hexachlorocyclopentadiene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of hexachlorocyclopentadiene as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
77-47-4 HEXACHLOROCYCLOPENTADIENE

50 FR 40286 10-02-85
Assessment of Ethylene Oxide as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of ethylene oxide as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add ethylene oxide to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
75-21-8 ETHYLENE OXIDE

50 FR 41466 10-10-85
Assessment of 1,3-Butadiene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of 1,3-butadiene as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add 1,3-butadiene to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
106-99-0 BUTADIENE,1,3-

50 FR 41994 10-16-85
Assessment of Ethylene Dichloride (EDC) as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of ethylene dichloride as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add ethylene dichloride to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
107-06-2 ETHYLENE DICHLORIDE

50 FR 42000 10-16-85
Assessment of Cadmium Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of cadmium as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add cadmium to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
7440-43-9	CADMIUM

50 FR 42037 10-17-85
Methylene Chloride; Initiation of Regulatory Investigation
EPA, Washington, D.C., OPTS

Abstract: Advance notice of proposed rulemaking. This notice announces the Agency's decision to initiate a priority review under section 4(f) of the Toxic Substances Control Act to determine risks of human cancer from certain exposures to methylene chloride.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
75-09-2	METHYLENE CHLORIDE

50 FR 52422 12-23-85
Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of trichloroethylene as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add trichloroethylene to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
79-01-6 TRICHLOROETHYLENE

50 FR 52880 12-26-85
Assessment of Perchloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of perchloroethylene as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add perchloroethylene to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
127-18-4 TETRACHLOROETHYLENE

51 FR 6382 02-21-86
National Emission Standards for Hazardous Air Pollutants; Standard for Radon-222 Emissions from Licensed Uranium Mill Tailings
EPA, Washington, D.C., ORP

Abstract: Proposed rule and announcement of public hearing. This proposed standard considers alternative work practice standards for limiting radon-222 emissions from tailings at licensed uranium mill sites. The EPA is taking the action because it has preliminarily concluded that radon-222 emissions from uranium mill tailings cause significant risks to nearby people and populations. The public hearing on this proposed rule will be held on February 27 and 28, 1986.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
10	METAL MINING
10043-92-2	RADON
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

51 FR 7714 03-05-86
Clarification and Correction of Previously Published Notice on the Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction. This notice clarifies and corrects statements published in a previous Federal Register notice on trichloroethylene dated December 23, 1985 (50 FR 52422).

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
79-01-6	TRICHLOROETHYLENE

51 FR 7718 03-05-86
Clarification and Correction of Previously Published Notice on the Assessment of Perchloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction. This notice clarifies and corrects statements published in a previous Federal Register notice on perchloroethylene dated December 26, 1985 (50 FR 52880).

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
127-18-4 TETRACHLOROETHYLENE

51 FR 8199 03-10-86
National Emission Standards for Hazardous Air Pollutants: Asbestos Standard; Correction
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction of a final rule for amendments to the asbestos standard. This action corrects typographical errors.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FED REGISTER NOTICES
1332-21-4 ASBESTOS

51 FR 8205 03-10-86
National Emission Standards for Hazardous Air Pollutants: Standard for Radon-222 Emissions from Licensed Uranium Mill Tailings; Rescheduled Hearing
EPA, Washington, D.C., ORP

Abstract: Announcement of new date for public hearing. The hearing date, previously announced by EPA to consider a proposed emission standard for radon-222 emissions from licensed uranium mill tailings, has been changed to March 25-26, 1986.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
10	METAL MINING
10043-92-2	RADON
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

51 FR 11103 04-01-86
Extension of the Public Comment Periods on the Notices of Intent to List Trichloroethylene and Perchloroethylene as Potentially Toxic Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: This notice corrects one word in the text of the Federal Register notice published on March 19, 1986 (51 FR 9510).

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FED REGISTER NOTICES
127-18-4	TETRACHLOROETHYLENE
79-01-6	TRICHLOROETHYLENE

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118-74-1 (HEXACHLOROBENZENE)
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Status Assessment of Toxic Chemicals: Hexachlorobenzene (PB80-146368)

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119-93-7 (DIMETHYLBENZIDINE,3,3'-)
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121-14-2 (DINITROTOLUENE,2,4-)
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Monograph on Human Exposure to Chemicals in the Workplace: 2,4-Dinitrotoluene (PB86-143468/XAB)

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122-60-1 (PHENYL GLYCIDYL ETHER)
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123-31-9 (HYDROQUINONE)
Criteria for a Recommended Standard: Occupational Exposure to Hydroquinone (PB81-226508)

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123-91-1 (DIOXANE,1,4-)
Criteria for a Recommended Standard: Occupational Exposure to Dioxane (PB-274 810)

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126-72-7 (DIBROMOPROPYLPHOSPHATE,TRIS,2,3-)
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126-99-8 (CHLOROBUTADIENE,2-,1,3-)
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Assessment of Chloroprene as a Potentially Toxic Air Pollutant (50 FR 39632 09-27-85)

127-18-4 (TETRACHLOROETHYLENE)
WHO Environmental Health Criteria, No. 31, Tetrachloroethylene (ISBN 92-4-154091-5)

Criteria for a Recommended Standard: Occupational Exposure to Tetrachloroethylene (Perchloroethylene) (PB-266 583)

Bioassay of Tetrachloroethylene for Possible Carcinogenicity. CAS No. 127-18-4 (PB-272 940/8)

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Source Assessment: Solvent Evaporation - Degreasing Operations (PB80-128812)

Organic Solvent Cleaners - Background Information for Proposed Standards (PB80-137912)

Perchloroethylene Dry Cleaners - Background Information for Proposed Standards (PB81-100497)

Method for Collection and Analysis of Chlorobenzenes (PB84-189646)

Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers (PB85-105880/REB)

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127-18-4 (TETRACHLOROETHYLENE)
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Health Assessment Document for Tetrachloroethylene (Perchloroethylene) (PB85-249704/XAB)

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1321 (NATURAL GAS LIQUIDS)
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1330-20-7 (XYLENE)
Criteria for a Recommended Standard: Occupational Exposure to Xylene (PB-246 702)

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Drinking Water and Health. Volume 1. (ISBN 0-309-02619-9)

Drinking Water and Health. Volume 5. (ISBN 0-309-03381-0)

IARC Scientific Publications No. 30. Biological Effects of Mineral Fibres (ISBN 92-832-1130-8)

IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 14: Asbestos (ISBN 92-832-1214-2)

Background Information-Proposed National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, Mercury (PB-204 876)

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Criteria for a Recommended Standard: Occupational Exposure to Asbestos (PB-273 965)

Standards Support Document: Promulgated Amendments to the National Emission Standard for Asbestos (PB-283 661)

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Occupational Exposure to Talc Containing Asbestos (PB80-193352)

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Feasibility of Developing Source Sampling Methods for Asbestos Emissions (PB82-196148)

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Directory of Federal and International Coordinating Groups for Toxic Substances, 3rd Edition (PB83-245175)

Airborne Asbestos Levels in Schools (PB84-129683)

Asbestiform Fibers: Nonoccupational Health Risks (PB85-125516/XAB)

Asbestos in Buildings: A National Survey of Asbestos-Containing Friable Materials (PB85-136653/REB)

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National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury (39 FR 15396 05-03-74)

Asbestos and Mercury, Proposed Amendments to National Emission Standards for Hazardous Air Pollutants (39 FR 38064 10-25-74)

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National Emission Standards for Hazardous Air Pollutants, Amendments to Asbestos Standard (43 FR 26372 06-19-78)

National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard (48 FR 32126 07-13-83)

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National Emission Standards for Hazardous Air Pollutants: Asbestos Standard; Correction (51 FR 8199 03-10-86)

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Waste Crankcase Oil Heater Study: Phase 2. Organic and Inorganic Speciation Analyses (PB84-212224)

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1746-01-6 (TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-)

Current Intelligence Bulletin 40 - 2,3,7,8 Tetrachlorodibenzo-p-dioxin (TCDD, "dioxin") (NIOSH 84-104)

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1746-01-6 (TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-)

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1910-42-5 (PARAQUAT)
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192-97-2 (BENZO(E)PYRENE)
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Method for Collection and Analysis of Chlorobenzenes (PB84-189646)

Textile Dyes and Dyeing Equipment: Classification, Properties and Environmental Aspects (PB85-173771/REB)

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National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, and Benzene Storage Vessels (49 FR 23558 06-06-84)

2865 (CYCLIC CRUDES AND INTERMEDIATES)

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2869 (INDUSTRIAL ORGANIC CHEMICALS, NEC)

Vinyl Chloride - An Information Resource (HRP-0028012/3)

Source Assessment: Acrylonitrile Manufacture (Air Emissions) (PB-271 969)

A Cross-Sectional Epidemiologic Survey of Vinyl Chloride Workers (PB-274 193)

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2869 (INDUSTRIAL ORGANIC CHEMICALS, NEC)

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Field Validation of EPA (Environmental Protection Agency) Reference Method 23 (PB83-214551)

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287 (AGRICULTURAL CHEMICALS)

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287 (AGRICULTURAL CHEMICALS)

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2873 (NITROGENOUS FERTILIZERS)

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2873 (NITROGENOUS FERTILIZERS)

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2874 (PHOSPHATIC FERTILIZERS)

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2875 (FERTILIZERS, MIXING ONLY)

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2875 (FERTILIZERS, MIXING ONLY)

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2879 (AGRICULTURAL CHEMICALS, NEC)

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Carcinogenesis Bioassay of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (CAS No. 1746-01-6) in Swiss-Webster Mice (Dermal Study) (PB82-163684)

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289 (MISCELLANEOUS CHEMICAL PRODUCTS)

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2891 (ADHESIVES AND SEALANTS)

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2892 (EXPLOSIVES)

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2893 (PRINTING INK)

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2895 (CARBON BLACK)

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2899 (CHEMICAL PREPARATIONS, NEC)

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29 (PETROLEUM AND COAL PRODUCTS)

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Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text (PB-221 736)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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29 (PETROLEUM AND COAL PRODUCTS)

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Draft Environmental Impact Statement Sulfur Oxides Emissions from Fluid Catalytic Cracking Unit Regenerators: Background Information for Proposed Standards (PB84-143254)

Environmental Assessment: Source Test and Evaluation Report - Rectisol Acid Gas Removal (PB84-153238)

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291 (PETROLEUM REFINING)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text (PB-221 736)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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291 (PETROLEUM REFINING)

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Draft Environmental Impact Statement Sulfur Oxides Emissions from Fluid Catalytic Cracking Unit Regenerators: Background Information for Proposed Standards (PB84-143254)

Environmental Assessment: Source Test and Evaluation Report - Rectisol Acid Gas Removal (PB84-153238)

Benzene Emissions from Benzene Storage Tanks: Background Information for Proposal to Withdraw Proposed Standards (PB84-167683)

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SO2 Emissions in Natural Gas Production Industry: Background Information for Promulgated Standards (PB86-119583/XAB)

National Emission Standard for Hazardous Air Pollutants; Benzene Fugitive Emissions (46 FR 1165 01-05-81)

2911 (PETROLEUM REFINING)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text (PB-221 736)

2911 (PETROLEUM REFINING)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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2911 (PETROLEUM REFINING)

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VOC Emissions from Volatile Organic Liquid Storage Tanks - Background Information for Proposed Standards (PB84-237320)

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2921-88-2 (CHLOROPYRIFOS)

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295 (PAVING AND ROOFING MATERIALS)

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Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 1. Main Text (PB-221 736)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

295 (PAVING AND ROOFING MATERIALS)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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Asphalt Roofing Manufacturing Industry - Background Information for Promulgated Standards (PB82-257726)

2951 (PAVING MIXTURES AND BLOCKS)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text (PB-221 736)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

Source Assessment: Asphalt Hot Mix (PB-276 731)

A Review of Standards of Performance for New Stationary Sources - Asphalt Concrete Plants (PB-298 427)

2952 (ASPHALT FELTS AND COATINGS)

Asbestos - An Information Resource (HRP-0028011/5)

2952 (ASPHALT FELTS AND COATINGS)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text (PB-221 736)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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298-00-0 (METHYL PARATHION)

Criteria for a Recommended Standard: Occupational Exposure to Methyl Parathion (PB-274 191)

299 (MISC. PETROLEUM AND COAL PRODUCTS)

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Industrial Process Profiles for Environmental Use: Chapter 2. Oil and Gas Production Industry (PB-291 639)

Criteria for a Recommended Standard: Occupational Exposures in Coal Gasification Plants (PB80-164874)

2992 (LUBRICATING OILS AND GREASES)

Industrial Process Profiles for Environmental Use: Chapter 2. Oil and Gas Production Industry (PB-291 639)

2999 (PETROLEUM AND COAL PRODUCTS, NEC)

Industrial Process Profiles for Environmental Use: Chapter 5. Basic Petrochemicals Industry (PB-266 224)

2999 (PETROLEUM AND COAL PRODUCTS, NEC)

Industrial Process Profiles for Environmental Use: Chapter 2. Oil and Gas Production Industry (PB-291 639)

Criteria for a Recommended Standard: Occupational Exposures in Coal Gasification Plants (PB80-164874)

30 (RUBBER AND MISC. PLASTICS PRODUCTS)

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A Cross-Sectional Epidemiologic Survey of Vinyl Chloride Workers (PB-274 193)

A Study of Methyl Methacrylate Exposures and Employee Health (PB-274 789)

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Source Assessment: Rubber Processing, State of the Art (PB-281 423)

Industrial Process Profiles for Environmental Use: Chapter 10. Plastics and Resins Industry (PB-291 640)

Source Assessment: Noncriteria Pollutant Emissions (1978 Update) (PB-291 747)

Status Assessment of Toxic Chemicals: Acrylonitrile (PB80-146301)

Rubber Tire Manufacturing Industry - Background Information for Proposed Standards (PB83-163543)

Rubber-Processing Chemicals Data Base (PB84-149137)

Current Intelligence Bulletin 41, 1,3-Butadiene CH_2-CH-CH=CH_2 National Institute of Occupational Safety and Health (PB84-198019)

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Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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3322 (MALLEABLE IRON FOUNDRIES)
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3324 (STEEL INVESTMENT FOUNDRIES)
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333 (PRIMARY NONFERROUS METALS)
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333 (PRIMARY NONFERROUS METALS)
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333 (PRIMARY NONFERROUS METALS)

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333-41-5 (DIAZINON)

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3331 (PRIMARY COPPER)

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3332 (PRIMARY LEAD)

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3332 (PRIMARY LEAD)

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3333 (PRIMARY ZINC)

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3334 (PRIMARY ALUMINUM)
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3339 (PRIMARY NONFERROUS METALS, NEC)
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3341 (SECONDARY NONFERROUS METALS)
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335 (NONFERROUS ROLLING AND DRAWING)
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Background Information for Standards of Performance: Primary Aluminum Industry. Volume 3: Supplemental Information (PB-250 667)

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335 (NONFERROUS ROLLING AND DRAWING)

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3351 (COPPER ROLLING AND DRAWING)

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Background Information for Standards of Performance: Primary Aluminum Industry. Volume 3: Supplemental Information (PB-250 667)

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3353 (ALUMINUM SHEET, PLATE, AND FOIL)

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Background Information for Standards of Performance: Primary Aluminum Industry. Volume 3: Supplemental Information (PB-250 667)

3354 (ALUMINUM EXTRUDED PRODUCTS)

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3355 (ALUMINUM ROLLING AND DRAWING, NEC)

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3356 (NONFERROUS ROLLING AND DRAWING, NEC)

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336 (NONFERROUS FOUNDRIES)

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Background Information for Standards of Performance: Primary Aluminum Industry. Volume II: Test Data Summary (PB-237 613)

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336 (NONFERROUS FOUNDRIES)

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3361 (ALUMINUM FOUNDRIES)

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3362 (BRASS, BRONZE, AND COPPER FOUNDRIES)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text (PB-221 736)

Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data. (PB-229 660)

Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards (PB-231 601)

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3369 (NONFERROUS FOUNDRIES, NEC)

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34 (FABRICATED METAL PRODUCTS)

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34 (FABRICATED METAL PRODUCTS)

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34 (FABRICATED METAL PRODUCTS)

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341 (METAL CANS AND SHIPPING CONTAINERS)

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753 (AUTOMOTIVE REPAIR SHOPS)
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76-13-1 (TRICHLOROTRIFLUOROMETHANE,1,1,2-)
Industrial Process Profiles for Environmental Use: Chapter 16. The Fluorocarbon-Hydrogen Fluoride Industry (PB-281 483)

Organic Solvent Cleaners - Background Information for Proposed Standards (PB80-137912)

Health Assessment Document for 1,1,2-Trichloro-1,2,2-Trifluoroethane (Chlorofluorocarbon CFC-113) (PB84-118843)

Assessment of Chlorofluorocarbon-113 as a Potentially Toxic Air Pollutant (50 FR 24313 06-10-85)

76-44-8 (HEPTACHLOR)
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As Assessment of the Health Risks of Seven Pesticides Used for Termite Control (PB83-136374)

76-46-9 (NITROPROPANE,2-)
Current Intelligence Bulletin Reprints - Bulletins 1 thru 18 (1975 - 1977) (PB83-105080)

7631-86-9 (SILICA)
Source Assessment: Harvesting of Grain - State of the Art (PB-271 697)

Source Assessment: Crushed Limestone, State of the Art (PB-281 422)

Source Assessment: Crushed Stone (PB-284 029)

Source Assessment: Open Mining of Coal, State of the Art (PB-288 497)

Health Hazard Control Technology Assessment of the Silica Flour Milling Industry (PB85-223196/XAB)

7637-07-2 (BORON TRIFLUORIDE)
Criteria for a Recommended Standard: Occupational Exposure to Boron Trifluoride (PB-274 747)

7647-01-0 (HYDROGEN CHLORIDE)
Medical and Biologic Effects of Environmental Pollutants: Chlorine and Hydrogen Chloride (ISBN 0-309-02519-2)

Source Assessment: Polychloroprene. State of the Art (PB-278 777)

Evaluation of Hazardous Waste Incineration in a Lime Kiln: Rockwell Lime Company (PB84-230044/REB)

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Performance Evaluation of Full-Scale Hazardous Waste Incinerators. Volume 3: Appendices A and B (PB85-129526/REB)

7647-01-0 (HYDROGEN CHLORIDE)

Performance Evaluation of Full-Scale Hazardous Waste Incinerators. Volume 4: Appendices C through J. (PB85-129534/REB)

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Evaluation of Hazardous Waste Incineration in an Aggregate Kiln: Florida Solite Corporation (PB85-189066/REB)

7664-39-3 (HYDROGEN FLUORIDE)

Industrial Process Profiles for Environmental Use: Chapter 16. The Fluorocarbon-Hydrogen Fluoride Industry (PB-281 483)

Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Fluoride (PB81-226516)

7664-41-7 (AMMONIA)

Principles of Toxicological Interactions Associated with Multiple Chemical Exposures (AD-A093 809/2)

Environmental Surveys of Aluminum Reduction Plants (PB-232 976)

Criteria for a Recommended Standard: Occupational Exposure to Ammonia (PB-246 699)

Source Assessment: Fertilizer Mixing Plants (PB-253 992)

Source Assessment: Beef Cattle Feedlots (PB-270 282)

Source Assessment: Ammonium Nitrate Production (PB-271 984)

Source Assessment: Synthetic Ammonia Production (PB-276 718)

Source Assessment: Coal Refuse Piles, Abandoned Mines and Outcrops, State of the Art (PB-288 210)

Source Assessment: Phosphate Fertilizer Industry (PB-300 681)

7664-93-9 (SULFURIC ACID)

Criteria for a Recommended Standard: Occupational Exposure to Sulfuric Acid (PB-233 098)

Final Guideline Document: Control of Sulfuric Acid Mist Emissions from Existing Sulfuric Acid Production Units (PB-274 085)

7664-93-9 (SULFURIC ACID)

Industrial Process Profiles for Environmental Use: Chapter 23. Sulfur, Sulfur Oxides and Sulfuric Acid (PB-281 490)

A Review of Standards of Performance for New Stationary Sources - Sulfuric Acid Plants (PB-292 278)

Immunotoxicity of Air Pollutants (PB84-183649)

Technical Assistance Document for Monitoring Sulfuric Acid Vapor from Stationary Sources (PB85-143261/REB)

Review of New Source Performance Standards for Sulfuric Acid Plants (PB85-249787/XAB)

Standards of Performance for New Stationary Sources, Emission Guidelines for the Control of Sulfuric Acid Mist from Existing Sulfuric Acid Production Units (41 FR 48706 11-04-76)

Standards of Performance for New Stationary Sources, Emission Guideline for Sulfuric Acid Mist (42 FR 55796 10-18-77)

7697-37-2 (NITRIC ACID)

Criteria for a Recommended Standard: Occupational Exposure to Nitric Acid (PB81-227217)

77-47-4 (HEXACHLOROCYCLOPENTADIENE)

Destroying Chemical Wastes in Commercial Scale Incinerators TRW Defense and Space Systems Group (PB-278 816)

Source Assessment: Pesticide Manufacturing Air Emissions - Overview and Prioritization (PB-279 171)

Kepone/Mirex/Hexachlorocyclopentadiene: An Environmental Assessment (PB-280 289/0)

Health Assessment Document for Hexachlorocyclopentadiene (PB85-124915/XAB)

Assessment of Hexachlorocyclopentadiene as a Potentially Toxic Air Pollutant (50 FR 40154 10-01-85)

7704-34-9 (SULFUR)

Industrial Process Profiles for Environmental Use: Chapter 23. Sulfur, Sulfur Oxides and Sulfuric Acid (PB-281 490)

Review of New Source Performance Standards for Petroleum Refinery Claus Sulfur Recovery Plants (PB84-101898)

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Review of New Source Performance Standards for Kraft Pulp Mills (PB84-154798)

Multimedia Pollution Assessment of the Wood Products Industries (PB84-160266)

Chemical and Physical Characterization of Municipal Sludge Incinerator Emissions (PB84-169325)

Correlation of Coal Properties with Environmental Control Technology Needs for Sulfur and Trace Elements (PB84-200666)

Kraft Pulp Mills, Draft Guideline Document: Availability (43 FR 7597 02-23-78)

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7722-64-7 (PERMANGANIC ACID)
Source Assessment: Beef Cattle Feedlots (PB-270 282)

7723-14-0 (PHOSPHOROUS (YELLOW))
Source Assessment: Fertilizer Mixing Plants (PB-253 992)

Radionuclides: Regulatory Impact Analysis of Emission Standards for Elemental Phosphorus Plants (PB85-132744/REB)

Radionuclides: Response to Comments for Final Rules. Volume 1 (PB85-134500/XAB)

Radionuclides: Response to Comments for Final Rules. Volume 2 (PB85-134518/XAB)

Radionuclides: Background Information Document for Final Rules. Volume 1 (PB85-165751/REB)

Radionuclides: Background Information Document for Final Rules. Volume 2 (PB85-165769/REB)

7726-95-6 (BROMINE)
Environmental Implications of Changes in the Brominated Chemicals Industry (PB82-247594)

Waste Crankcase Oil Heater Study: Phase 2. Organic and Inorganic Speciation Analyses (PB84-212224)

7738-94-5 (CHROMIC ACID)
Monograph on Human Exposure to Chemicals in the Workplace: Chromic Acid (PB86-148368/XAB)

7775-09-9 (SODIUM CHLORATE)
Source Assessment: Defoliation of Cotton, State of the Art (PB-272 621)

7778-39-4 (ARSENIC ACID)
Source Assessment: Defoliation of Cotton, State of the Art (PB-272 621)

7782-41-4 (FLUORINE)
WHO Environmental Health Criteria, No. 36, Fluorine and Fluorides (ISBN 92-4-154096-6)

Source Assessment: Fertilizer Mixing Plants (PB-253 992)

7782-49-2 (SELENIUM COMPOUNDS, AS SE)
Medical and Biologic Effects of Environmental Pollutants: Selenium (ISBN 0-309-02503-6)

IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 9: Some Aziridines, N-, S- & O-mustards and Selenium (ISBN 92-832-1209-6)

Source Assessment: Glass Container Manufacturing Plants (PB-262 002)

Source Assessment: Pressed and Blown Glass Manufacturing Plants (PB-273 788)

Control of Criteria and Non-Criteria Pollutants from Coal/Oil Mixture Combustion (PB83-247247)

7782-50-5 (CHLORINE)
Medical and Biologic Effects of Environmental Pollutants: Chlorine and Hydrogen Chloride (ISBN 0-309-02519-2)

Source Assessment: Fertilizer Mixing Plants (PB-253 992)

Criteria for a Recommended Standards: Occupational Exposure to Chlorine (PB-266 367)

Source Assessment: Pesticide Manufacturing Air Emissions - Overview and Prioritization (PB-279 171)

Waste Crankcase Oil Heater Study: Phase 2. Organic and Inorganic Speciation Analyses (PB84-212224)

7783-06-4 (HYDROGEN SULFIDE)

WHO Environmental Health Criteria, No. 19, Hydrogen Sulfide (ISBN 92-4-154079-6)

Source Assessment: Carbon Black Manufacture (PB-273 068)

Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Sulfide (PB-274 196)

Source Assessment: Coal Refuse Piles, Abandoned Mines and Outcrops, State of the Art (PB-288 210)

Validation of Chemical and Biological Techniques for Evaluation of Vapors in Ambient Air/Mutagenicity Testing of Twelve (12) Vapor-Phase Compounds (PB84-164219)

7783-20-2 (AMMONIUM SULFATE)

Ammonium Sulfate Manufacture - Background Information for Proposed Emission Standards (PB80-140163)

Ammonium Sulfate Manufacture - Background Information for Promulgated Emission Standards (PB81-118747)

Review of New Source Performance Standards for Ammonium Sulfate Manufacture (PB85-181139/REB)

7784-42-1 (ARSINE)

Current Intelligence Bulletin 32 - Arsine (Arsenic Hydride) Poisoning in the Workplace (NIOSH 79-142)

Monograph on Human Exposure to Chemicals in the Workplace: Arsine (PB86-143518/XAB)

78-48-8 (PHOSPHOROTRIDIOIC ACID)

Source Assessment: Defoliation of Cotton, State of the Art (PB-272 621)

78-87-5 (DICHLOROPROPANE,1,2-)

Monograph on Human Exposure to Chemicals in the Workplace: 1,2-Dichloropropane (PB86-143492/XAB)

78-93-3 (BUTANONE,2-)

Evaluation of Hazardous Waste Incineration in an Aggregate Kiln: Florida Solite Corporation (PB85-189066/REB)

Destruction of VOCs (Volatile Organic Compounds) by a Catalytic Paint Drying (Infrared) Device (PB85-215333/REB)

79-01-6 (TRICHLOROETHYLENE)

Carcinogenesis Bioassay of Trichloroethylene. CAS No. 79-01-6 (PB-264 122/3)

Organic Solvent Cleaners - Background Information for Proposed Standards (PB80-137912)

Status Assessment of Toxic Chemicals: Trichloroethylene (PB80-146426)

Special Occupational Hazard Review With Control Recommendations - Trichloroethylene (PB81-226987)

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Field Validation of EPA (Environmental Protection Agency) Reference Method 23 (PB83-214551)

Validation of Chemical and Biological Techniques for Evaluation of Vapors in Ambient Air/Mutagenicity Testing of Twelve (12) Vapor-Phase Compounds (PB84-164219)

Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers (PB85-105880/REB)

Health Assessment Document for Trichloroethylene (PB85-249696/XAB)

Survey of Trichloroethylene Emission Sources (PB86-107943/XAB)

Monograph on Human Exposure to Chemicals in the Workplace: Trichloroethylene (PB86-147220/XAB)

Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant (50 FR 52422 12-23-85)

Clarification and Correction of Previously Published Notice on the Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant (51 FR 7714 03-05-86)

Extension of the Public Comment Periods on the Notices of Intent to List Trichloroethylene and Perchloroethylene as Potentially Toxic Air Pollutants (51 FR 11103 04-01-86)

79-06-1 (ACRYLAMIDE)

Criteria for a Recommended Standard: Occupational Exposure to Acrylamide (PB-273 871)

79-10-7 (ACRYLIC ACID)
Source Assessment: Acrylic Acid Manufacture: State of the Art (PB-288 161)

79-34-5 (TETRACHLOROETHANE,1,1,2,2-)
Criteria for a Recommended Standard: Occupational Exposure to 1,1,2,2-Tetrachloroethane (PB-273 802)

79-44-7 (DIMETHYLCARBAMYL CHLORIDE)
Current Intelligence Bulletin Reprints - Bulletins 1 thru 18 (1975 - 1977) (PB83-105080)

79-46-9 (NITROPROPANE,2-)
Validation of Chemical and Biological Techniques for Evaluation of Vapors in Ambient Air/Mutagenicity Testing of Twelve (12) Vapor-Phase Compounds (PB84-164219)

Monograph on the Potential Carcinogenic Risk to Humans: Nitropropanes (PB86-143393/XAB)

80 (HEALTH SERVICES)
Special Occupational Hazard Review With Control Recommendations - Use of Ethylene Oxide as a Sterilant in Medical Facilities (PB-274 795)

Survey of Ethylene Dichloride Emission Sources (PB85-155927/XAB)

80-62-6 (METHACRYLIC ACID)
A Study of Methyl Methacrylate Exposures and Employee Health (PB-274 789)

Destroying Chemical Wastes in Commercial Scale Incinerators TRW Defense and Space Systems Group (PB-278 816)

8001-35-2 (TOXAPHENE)
WHO Environmental Health Criteria, No. 45, Camphechlor (ISBN 92-4-154185-7)

Atmospheric Transport of Toxaphene to Lake Michigan (PB85-121143/REB)

8002-05-9 (PETROLEUM DISTILLATES)
Industrial Process Profiles for Environmental Use: Chapter 3. Petroleum Refining Industry (PB-273 649)

8006-61-9 (GASOLINE)
Monograph on Human Exposure to Chemicals in the Workplace: Gasoline (PB86-143419/XAB)

8006-64-2 (TURPENTINE)
Monograph on the Potential Carcinogenic Risk to Humans: Turpentine (PB86-143351/XAB)

8007-45-2 (COAL TAR PITCH VOLATILES)
Environmental Surveys of Aluminum Reduction Plants (PB-232 976)

Criteria for a Recommended Standard: Occupational Exposure to Coal Tar Products (PB-276 917)

8021-39-4 (CREOSOTE)
Monograph on Human Exposure to Chemicals in the Workplace: Creosote (PB86-147303/XAB)

8052-42-4 (ASPHALT (PETROLEUM) FUMES)
Criteria for a Recommended Standard: Occupational Exposure to Asphalt Fumes (PB-277 333)

806 (HOSPITALS)
Survey of Ethylene Dichloride Emission Sources (PB85-155927/XAB)

807 (MEDICAL AND DENTAL LABORATORIES)
Special Occupational Hazard Review With Control Recommendations - Use of Ethylene Oxide as a Sterilant in Medical Facilities (PB-274 795)

8071 (MEDICAL LABORATORIES)
Special Occupational Hazard Review With Control Recommendations - Use of Ethylene Oxide as a Sterilant in Medical Facilities (PB-274 795)

82 (EDUCATIONAL SERVICES)
Airborne Asbestos Levels in Schools (PB84-129683)

82-68-8 (PENTACHLORONITROBENZENE)
WHO Environmental Health Criteria, No. 41, Quintozene (ISBN 92-4-154181-4)

Monograph on Human Exposure to Chemicals in the Workplace: Pentachloronitrobenzene (PB86-147253/XAB)

821 (ELEMENTARY AND SECONDARY SCHOOLS)
Airborne Asbestos Levels in Schools (PB84-129683)

84-65-1 (ANTHRAQUINONES)
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 27: Some Aromatic Amines, Anthraquinones and Nitroso Compounds, and Inorganic Fluorides used in Drinking-Water and Dental Preparation (ISBN 92-832-1227-4)

85-00-7 (DIQUOT)
WHO Environmental Health Criteria, No. 39, Paraquat and Diquat (ISBN 92-4-154099-0)

85-44-9 (PHTHALIC ANHYDRIDE)
Source Assessment: Phthalic Anhydride (Air Emissions) (PB-266 797)

Bioassay of Phthalic Anhydride for Possible Carcinogenicity (PB-293 594/8)

87-86-5 (PENTACHLOROPHENOL)
As Assessment of the Health Risks of Seven Pesticides Used for Termite Control (PB83-136374)

Controlled Air Incineration of Pentachlorophenol-Treated Wood (PB84-189851)

88-10-8 (CARBAMOYL CHLORIDE)
Current Intelligence Bulletin Reprints - Bulletins 1 thru 18 (1975 - 1977) (PB83-105080)

88-74-4 (NITROANILINE,O-)
Monograph on Human Exposure to Chemicals in the Workplace: Nitroanilines (PB86-147295/XAB)

90-13-1 (CHLORONAPHTHALENE,1-)
Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers (PB85-105880/REB)

9002-86-2 (POLYVINYL CHLORIDE LATEX)
A Cross-Sectional Epidemiologic Survey of Vinyl Chloride Workers (PB-274 193)

Destroying Chemical Wastes in Commercial Scale Incinerators TRW Defense and Space Systems Group (PB-278 816)

Source Assessment: Polyvinyl Chloride (PB-283 395)

Vinyl Chloride: A Review of National Emission Standards (PB84-114354)

Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry (PB85-245280/XAB)

9002-88-4 (POLYETHYLENE)
Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry (PB85-245280/XAB)

9002-89-5 (POLYVINYL ALCOHOL)
Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry (PB85-245280/XAB)

9003-07-0 (PROPENE POLYMERS)
Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry (PB85-245280/XAB)

9003-54-7 (ACRYLONITRILE POLYMER WITH STYRENE)
Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry (PB85-245280/XAB)

9011-14-7 (POLYMETHYLMETHACRYLATE)
A Study of Methyl Methacrylate Exposures and Employee Health (PB-274 789)

91-59-8 (NAPHTHYLAMINE,2-)
Current Intelligence Bulletin Reprints - Bulletins 1 thru 18 (1975 - 1977) (PB83-105080)

92-52-4 (BIPHENYL)
Monograph on Human Exposure to Chemicals in the Workplace: Diphenyl (PB86-143450/XAB)

92-87-5 (BENZIDINE)
Health Hazard Alert: OSHA/NIOSH - Benzidine-,o-Tolidine-, and o-Dianisidine-Based Dyes (NIOSH 81-106)

Status Assessment of Toxic Chemicals: Benzidine (PB80-146343)

Carcinogenicity and Metabolism of Azo Dyes, Especially Those Derived from Benzidine (PB81-171027)

Special Occupational Hazard Review for Benzidine-Based Dyes (PB81-225633)

93-72-1 (SILVEX)
Current Intelligence Bulletin 40,2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin') (PB84-198001)

93-76-5 (TRICHLOROPHENOXYACETICACID,2,4,5-)
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 15: Some Fumigants, the Herbicides, 2,4-D and 2,4,5-T, Chlorinated Dibenzodioxins and Miscellaneous Industrial Chemicals (ISBN 92-832-1215-0)

Current Intelligence Bulletin 40,2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin') (PB84-198001)

94-36-0 (BENZOYL PEROXIDE)
Criteria for a Recommended Standard: Occupational Exposure to Benzoyl Peroxide (PB-273 819)

94-75-7 (DICHLOROPHENOXYACETICACID,2,4-)
WHO Environmental Health Criteria, No. 29, 2,4-Dichlorophenoxyacetic Acid (2,4-D) (ISBN 92-4-154089-3)

IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 15: Some Fumigants, the Herbicides, 2,4-D and 2,4,5-T, Chlorinated Dibenzodioxins and Miscellaneous Industrial Chemicals (ISBN 92-832-1215-0)

Relative Airborne Losses of Commercial 2,4-D Formulations from a Simulated Wheat Field (PB84-142322)

95 (ENVIRONMENTAL QUALITY AND HOUSING)
Systems Reliability and Performance: Pilot-Scale Incineration of Chlorinated Benzenes at the Combustion Research Facility (PB85-121184/REB)

95-49-8 (CHLOROTOLUENE,O-)
Burning Waste Chlorinated Hydrocarbons in a Cement Kiln (PB-280 118)

Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers (PB85-105880/REB)

95-51-2 (CHLOROANALINE,O-)
Aromatic Amines: An Assessment of the Biological and Environmental Effects (PB83-133058)

95-80-7 (DIAMINOTOLUENE,2,4-)
Aromatic Amines: An Assessment of the Biological and Environmental Effects (PB83-133058)

95-95-4 (TRICHLOROPHENOL,2,4,5-)
Current Intelligence Bulletin 40,2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin') (PB84-198001)

Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers (PB85-105880/REB)

951 (ENVIRONMENTAL QUALITY)
Systems Reliability and Performance: Pilot-Scale Incineration of Chlorinated Benzenes at the Combustion Research Facility (PB85-121184/REB)

9511 (AIR, WATER & SOLID WASTE MANAGEMENT)
Systems Reliability and Performance: Pilot-Scale Incineration of Chlorinated Benzenes at the Combustion Research Facility (PB85-121184/REB)

96-09-3 (STYRENE OXIDE)
Teratologic Assessment of Butylene Oxide, Stryrene Oxide and Methyl Bromide (PB81-168510)

Alkyl Benzenes (PB82-160334)

96-12-8 (DIBROMOCHLOROPROPANE,1,2-,3-)
Criteria for a Recommended Standard: Occupational Exposure to Dibromochloropropane (PB81-228728)

96-45-7 (ETHYLENE THIOUREA)
Current Intelligence Bulletin Reprints - Bulletins 18 Thru 30 for 1978 (PB80-115223)

Special Occupational Hazard Review With Control Recommendations for Ethylene Thiourea (PB82-111840)

97 (NATIONAL SECURITY AND INTL. AFFAIRS)
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 1 (AD-A142 133/8)

Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 2 (AD-A152 471/9/XAB)

Disposal of Chemical Munitions and Agents (ISBN 0-309-03527-9)

Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents. Volume 1: Anticholinesterases and Anticholinergics (PB83-181271)

Emergency and Continuous Exposure Guidance Levels for Selected Airborne Contaminants. Volume 4 (PB85-239630/XAB)

97 (NATIONAL SECURITY AND INTL. AFFAIRS)
Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents, Vol 2: Cholinesterase Reactivators, Psychochemicals and Irritants and Vesicants (PUB-ON-DEMAND-2)

97-77-8 (TETRAETHYLTHIURAM DISULFIDE)
Current Intelligence Bulletin Reprints - Bulletins 18 Thru 30 for 1978 (PB80-115223)

971 (NATIONAL SECURITY)
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 1 (AD-A142 133/8)

Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 2 (AD-A152 471/9/XAB)

Disposal of Chemical Munitions and Agents (ISBN 0-309-03527-9)

Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents. Volume 1: Anticholinesterases and Anticholinergics (PB83-181271)

Emergency and Continuous Exposure Guidance Levels for Selected Airborne Contaminants. Volume 4 (PB85-239630/XAB)

Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents, Vol 2: Cholinesterase Reactivators, Psychochemicals and Irritants and Vesicants (PUB-ON-DEMAND-2)

9711 (SIC - 9711 NATIONAL SECURITY)
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 1 (AD-A142 133/8)

Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 2 (AD-A152 471/9/XAB)

Emergency and Continuous Exposure Guidance Levels for Selected Airborne Contaminants. Volume 4 (PB85-239630/XAB)

98-00-0 (FURFURAL ALCOHOL)
Criteria for a Recommended Standard: Occupational Exposure to Furfurl Alcohol (PB80-176050)

98-82-8 (CUMENE)
Alkyl Benzenes (PB82-160334)

98-95-3 (NITROBENZENE)
Destroying Chemical Wastes in Commercial Scale Incinerators TRW Defense and Space Systems Group (PB-278 816)

Validation of Chemical and Biological Techniques for Evaluation of Vapors in Ambient Air/Mutagenicity Testing of Twelve (12) Vapor-Phase Compounds (PB84-164219)

Hazardous Air Pollutants: Dry-Deposition Phenomena (PB85-138279/REB)

Hazardous Air Pollutants: Wet Removal Rates and Mechanisms (PB85-138626/REB)

99-30-9 (DICHLORAN)
Monograph on Human Exposure to Chemicals in the Workplace: 2,6-Dichloro-4-Nitroaniline (PB86-143526/XAB)

PART 4: APPENDICES

APPENDIX A: CITATION FOR NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES BIBLIOGRAPHY

APPENDIX B: UNPUBLISHED SOURCES OF EPA INFORMATION

APPENDIX C: ORDERING INFORMATION

APPENDIX A

CITATION FOR NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES BIBLIOGRAPHY

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For the most part, the staff of the National Institute of Environmental Health Sciences publishes its research in journal articles, conference papers, and books rather than in technical reports. Citations to this pubished research are listed in the National Institute of Environmental Health Sciences Bibliography 1966-1984. Inquiries regarding the bibliography should be directed to:

Library and Information Services
National Institute of Environmental Health Sciences
P.O. Box 12233
Research Triangle Park, North Carolina 27709

No lists of 1985-86 intramural research are available at this time.

APPENDIX B

UNPUBLISHED SOURCES OF EPA INFORMATION

CANCER RISK ASSESSMENTS

Cancer risk assessments have been prepared for the chemicals listed below. These assessments were prepared by the Carcinogen Assessment Group located in the EPA Office of Health and Environmental Assessment. Most of these assessments are preliminary in nature and many are several years old. In the case of scientific reports such as these, updating is always necessary and revisions could substantially alter the unit risk information. Several risk assessments have been revised and updated and are contained in the health assessment documents, which are listed in both the Document Type Index and the Pollutant Name/Class Index. These revised and updated risk assessments are indicated below with a single asterisk (*) and are available from the National Technical Information Service (NTIS). Other risk assessments, which are in the process of being revised and updated, are indicated below with a double asterisk (**).

Single copies of the preliminary assessments (without an asterisk [*]) are available to State and local air pollution control agencies. Requests should be made in writing to:

Technical Information Staff (RD-689)
Office of Health and Environmental Assessment
U. S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

The following 34 chemicals have been reviewed by the Carcionogen Assessment Group:

**Acetaldehyde
**Acrolein
*Acrylonitrile
Allyl chloride
*Arsenic
Benzene
Benzyl chloride
*Beryllium
*Cadmium
*Chlorobenzene
*Coke oven emissions
Cresols
*Epichlorohydrin
Ethylene dibromide (EDB)
(1,2-Dibromoethane)
*Ethylene dichloride
*Ethylene oxide
Formaldehyde
Maelic anhydride
*Manganese
*Methyl chloroform
Methyl iodide

*Methylene chloride
*Nickel
Nitrobenzene
Nitrosamines
**Phosgene
Polycylic organic matter (POM)
Propylene oxide
*Tetrachloroethylene (Perchloroethylene)
*Toluene
*Trichloroethylene
Vinyl chloride
*Vinylidene chloride
Xylenes

*These risk assessments have been updated and are included in OHEA's health assessment documents, which are available from the National Technical Information Service (NTIS).

**These risk assessments are in the process of being updated as part of OHEA's health assessment documents and will soon be available in draft form.

CHEMICAL HAZARD INFORMATION PROFILES

A Chemical Hazard Information Profile (CHIP), which is prepared by EPA's Office of Pesticides and Toxic Substances (OPTS), is a brief summary of readily available information concerning the health and environmental effects and potential exposure to a chemical. The OPTS chooses chemicals for CHIP preparation on the basis of information indicating a potential for adverse health or environmental effects along with evidence of significant production or some type of exposure.

Information gathering for a CHIP is generally limited to a search of secondary literature sources, which are identified by a search of automated data bases and standard reference works. The OPTS also solicits unpublished information about the selected chemicals from individuals and companies. The search is not intended to be exhaustive, although in-depth searches on specific topics may be done on a case-by-case basis.

In general, no attempt is made to evaluate or validate information at this stage of assessment. Preparation of a CHIP is part of the first stage in the OPTS chemical risk assessment process. The purpose of the CHIP is to enable OPTS to make a tentative decision on an appropriate course of action for the subject chemical and to identify and characterize problems that may require more thorough investigation and evaluation.

A list of individual CHIPs by subject appears below. For more detailed information as to all the chemical names and the CAS numbers that appear in each CHIP, or to obtain a copy of any of the available CHIPs, contact:

TSCA Industry Assistance Office (TAO) (TS-799)
U. S. Environmental Protection Agency
Washington, D.C. 20460
(800) 424-9065 (toll free)
(202) 554-1404 (in Washington, D.C. or from outside continental U.S.)

The following list of Chemical Hazard Information Profiles is current through January 1986. To update this list, consult the TSCA Chemicals-in-Progress Bulletin, which notifies the public as new CHIPs are completed. In order to get on the mailing list for the free bulletin, contact the TAO as indicated above.

Acetaldehyde
Acetaldehyde-2
Acetronitrile
Acrolein
Acrylic acid
Adipate ester plasticizers
Alkyl phthalates
Alkylated phenol sulfides
Allyl chloride
Aluminum and aluminum compounds
Aminoanthraquinone
Amino-9-ethyl carbazole
o-Aminophenol
p-Aminophenol
Aminoundecanoic acid
Aniline
Antimony trioxide
Auramine
Azobenzene
Benzal chloride
Benzotrichloride
Benzoyl chloride
Benzyl Acetate
Benzyl Chloride
Biphenyl
Bis(2-Chloro-1-methylethyl)ether
Bisphenol A
Brilliant Blue FCF
Bromine and bromine compounds
Butadiene
Butanol (iso)
Butyl benzaldehyde
Butyl benzoic acid
Butyl hydroperoxide
Butyl toluene
Butylated hydroxytoluene
C.I. Disperse Yellow 3
Carbon black 1
Carbon black 2
Carbon tetrachloride
Chloronitrobenzene (2-)
Chloronitrobenzene (4-)
Chlorobenzotrichloride (4-)
Chlorodifluoromethane
Chloroethane 1
Chloroethane 2
Chloroethylene
Chlorohydrin (alpha)
Chloromethane
Chloromethylpropene
Cobalt naphthenate
Cumene hydroperoxide
Cutting fluids
Cyanuric acid and chlorinated derivatives
Cyclohexylamine
D and C Red #9
Diallyl phthalate
Diaminoazobenzene (2,4-)
Diaminobiphenyl ether 1
Diaminobiphenyl ether 2
Diaminohexane
Diazabicyclooctane
Dibromoethane
Dichloro-2-butene (1,4)
Dichloroacetaldehyde
Dichloroethane
Dichloromethane
Dichloro dioxane
Dichloropropane
Dicyandiamide/diethylenetri-amine/EP
Diethylene glycol
Diethylhexyl adipate
Diethylphosphorochlorothioate
Dihydrosafrole
Dimethoxane 1
Dimethoxane 2
Dimethoxyethyl phthalate
Dimethyl hydrogen phosphite
Dimethylformamide 1
Dimethylformamide 2
Dimethyl methylphosphonate
Dimethylphosphorochlorothioate
Dimethylthiourea

Dinitrochlorobenzene
Dinitrophenol
Dinitrosopentamethylenetetramine
Dinitrotoluene
Dioxane
Epoxy/chlorohydroxy propyl trimethylammonium chloride
Ethanolamines
Ethoxyethanol
Ethoxyethanol acetate
Ethyl acrylate
Ethylamines
Ethylene oxide
Ethylenediamine
Ethylenediaminetetra (Methylene phosphoric acid)
Ethylhexyl acrylate EDTMPA
Formaldehyde
Formamide
Gentian violet
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloronorbornadiene
Hexafluoroacetone
Hexamethylphosphoramide
Hexamethylphosphoramide 2
Hexane
High explosive
Hydrazobenzene
Hydroxylamine
Isobutyl alcohol
Isopropyl alcohol 1
Isopropyl alcohol 2
Lithium and lithium compounds
Maleic anhydride 1
Maleic anhydride 2
Melamine
Mercaptobenzothiazole disulfide
Methanol
Methoxyethanol
Methoxyethanol acetate
Methylcyclopentadienyl manganese tricarbonyl
Methyl ethyl ketone peroxide
Methyl N-amyl ketone
Methyl N-butyl ketone
Methylnitropropyl-4-nitrosoaniline
Methylamines
Methyl bromide
Methylcyclohexane
Methylene bix (2-chloroaniline)
Methyl diphenyldiisocyanate
Methylenebis(n,n-dimethyl)-benzenamine
Methylpyridine (2-)
Methylpyridine (3-)
Methylpyridine (4-)
Mono/dichlorophenols
Morpholine
Naptha (Petroleum) solvents
Neopentyl glycol diacrylate
Neopentyl glycol diglycidyl ether
Nitro-o-anisidine
Nitro-o-toluidine
Nitrobenzene
Nitropropane
Nitroso compounds
Nitrosodiphenylamine
Nonylphenol
Oxybis(2-methoxy)ethane
Pentabromochlorocyclohexane
Pentachloroethane
Pentanone
Phenyl glycidyl ether
Phenylenediamines
Phenylethanol
Phosgene
Phthalimide
Polysorbate 20
n-Propyl alcohol
Propionitrile
Quartz, Silica, Crystalline
Quinoline
Rhodamine B
Semicarbazide
Sodium azide
Styrene oxide
Sulfolane
Sulfur hexafluoride
Tellurium 1
Tellurium 2
Terephthalic acid
Tetrabromoethane
Tetrachloroethane
Tetrachloro-1-propene
Tetrahydrofuran 1
Tetrahydrofuran 2
Tetramethylsuccinonitrile
Thiourea
Thorium dioxide

TMOHS (Silane A-186)
Toluene
Toluene diisocyanate
Toluene-2,4-diamine
ortho-Toluidine
Tri(alkyl/alkoxy)phosphates
Tribromophenol
Trichloroacetaldehyde
Trichlorobutylene oxide
Trichloroethane
Triethyl phosphate
Triethanolamine
Triethylene tetramine
Trimellitic anhydride
Trimethyl phosphite
Trinitrofluorenone
Trinitrotoluene
Trioctylamine
Triphenyl phosphite
Tris(1,3-dichloro-2-propanol) phosphate
Urethane
Vermiculite
Vinyl acetate
Vinyl bromide
Vinyl fluoride
Vinyl-1-cyclohexene
Vinylcyclohexene
Vinylidene bromide
Vinylidene fluoride
Ziram

EXPOSURE ASSESSMENTS/MATERIAL BALANCES

A set of microfiche containing primarily unpublished exposure assessments and material balances is available on loan from EPA. Some of these assessments discuss multi-media exposure and others discuss exposure via a single medium. One copy of the set may be borrowed for a one-month period from the Office of Health and Environmental Assessment (contact Richard Walentowicz, U. S. EPA, Office of Health and Environmental Assessment (RD-689), 401 M Street, S.W., Washington, D.C. 20460) and one copy is available to be checked out from each of EPA's ten regional libraries. A new set, which includes additional substances, is scheduled to be available in September 1986. The set includes information for the following substances in CAS number order:

----	Chlorinated paraffins
SEQ 20	Chlorophenols
SEQ 3	Coke oven emissions
----	Coke plant emissions
----	Creosote
----	Dichlorobenzenes
----	Handbook
----	Inorganic arsenicals
SEQ X1	Nitrosamines
SEQ 6	Polycyclic aromatic hydrocarbons (PAHs)
----	Trihalomethanes
SEQ 9	Urethane and chlorofluorocarbons
----	Zinc dialkyldithiophosphates
50-00-0	Formaldehyde
50-29-3	DDT
50-32-8	Benzo(a)pyrene
56-23-5	Carbon tetrachloride
57-12-5	Cyanide
57-24-9	Strychnine
57-56-7	Semicarbazide
57-74-9	Chlordane
58-89-9	Lindane
58-90-2	2,3,4,6-Tetrachlorophenol
67-66-3	Chloroform
67-72-1	Hexachloroethane
71-23-8	Propyl alcohol,N-
71-43-2	Benzene
71-55-6	1,1,1-Trichloroethane

72-43-5	Methoxychlor
74-87-3	Methyl chloride
75-01-4	Vinyl chloride
75-07-0	Acetalhyde
75-09-2	Methylene chloride
75-20-8	Endrin
75-21-8	Ethylene oxide
75-34-3	1,1-Dichloroethane
75-35-4	1,1-Dichloroethylene
75-44-5	Phosgene
75-56-9	Propylene oxide
75-71-8	Dichlorodifluoromethane
76-44-8	Heptachlor
77-47-4	Hexachloropentadiene
78-83-1	Iso-butyl alcohol
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
79-06-1	Acrylamide
79-34-5	1,1,2,2-Tetrachloroethane
79-46-9	2-Nitropropane
84-66-2	Diethyl phthalate
84-74-2	Di-n-butyl phthalate
85-44-9	Phthalic anhydride
85-68-7	Butyl benzyl phthalate
87-86-5	Pentachlorophenol
88-06-2	2,4,6-Trichlorophenol
88-73-3	2-Chloronitrobenzene
91-20-3	Naphthalene
93-72-1	Silvex
93-76-5	Trichlorophenoxyacetic acid (245-Ti)
95-47-6	o-Xylene
95-48-7	o-Cresol
95-50-1	o-Dichlorobenzene
95-53-4	o-Toluidine
95-57-8	2-Chlorophenol
95-80-7	4-Methyl-1,3-benzenediamine
95-94-3	1,2,4,5-Tetrachlorobenzene
95-95-4	2,4,5-Trichlorophenol
96-12-8	1,2-Dibromo-3-chloropropane
98-95-3	Nitrobenzene
100-00-5	4-Chloronitrobenzene
100-41-4	Ethylbenzene
100-42-5	Styrene
100-44-7	Benzyl chloride
101-14-4	4,4'-Methylenbis(2-Chloroaniline) (MOCA)
103-11-7	2-Ethyl hexyl acrylate
103-21-1	Di(2-ethylhexyl)adipate
106-42-3	p-Xylene
106-44-5	p-Cresol
106-46-7	p-Dichlorobenzene

106-48-9	4-Chlorophenol
106-89-8	Epichlorohydrin
106-93-4	Ethylene Dibromide
106-99-0	1,3-Butadiene
107-02-8	Acrolein
107-05-1	Allyl chloride
107-06-2	1,2-Dichloroethane
107-13-1	Acrylonitrile
108-38-3	m-Xylene
108-39-4	m-Cresol
108-80-5	Cynuric acid
108-88-3	Toluene
108-90-7	Chlorobenzene
108-95-2	Phenol
109-86-4	2-Methoxyethanol
110-49-6	2-Methoxyethyl acetate
110-80-5	2-Ethoxyethanol
110-91-8	Morpholine
111-15-9	2-Ethoxyethyl acetate
115-29-7	Endosulfan
117-81-7	Di(2-ethylhexyl)phthalate
117-84-0	Di-n-octyl phthalate
118-74-1	Hexachlorobenzene
120-78-5	Mercaptobenzothiazole disulfide
120-82-1	1,2,4-Trichlorobenzene
120-83-2	2,4-Dichlorophenol
124-40-3	Dimethylamine
126-99-8	Chloroprene
127-18-4	Tetrachloroethylene
139-13-9	Nitrilotriacetic acid (NTA)
140-88-5	Ethyl acrylate
141-32-2	Butyl acrylate
143-50-0	Kepone
149-57-5	2-Ethylhexanoic acid
495-54-5	2,4-Diaminoazobenzene
510-15-6	Chlorobenzilate
532-82-1	2,4-Diaminoazobenzene HCL Salt
540-59-0	1,2-Dichloroethylene
542-88-1	Bis(chloromethyl)ether
563-41-7	Semicarbazide hydrochloride
593-60-2	Vinyl bromide
608-93-5	Pentachlorobenzene
630-08-0	Carbon monoxide
634-90-2	1,2,3,5-Tetrachlorobenzene
636-21-5	o-Toluidine hydrochloride
756-79-6	Dimethyl methyl phosphonate

1024-57-3	Heptachlor epoxide
1116-54-7	N-Nitrosodiethanolamine
1318-00-9	Vermiculate
1336-36-3	Polychlorinated biphenyls (PCBs)
1582-09-8	Trifluralin
1746-01-6	Dioxin
2385-85-5	Mirex
2432-99-7	11-Aminoundecanoic acid
2832-40-8	Disperse Yellow 3/Solvent Yellow 77
3883-43-0	2,3-Dichloro-1,4-doxane
5160-02-1	Pigment red 53:1
7439-92-1	Lead
7439-96-5	Manganese
7439-97-6	Mercury
7440-02-4	Nickel
7440-22-4	Silver
7440-28-0	Thallium
7440-36-0	Antimony
7440-38-2	Arsenic
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-47-3	Chromium
7440-50-8	Copper
7440-66-6	Zinc
8001-35-2	Toxaphene
9002-86-2	Polyvinyl chloride
9010-98-4	Polychloroprene
11104-93-1	Nitrous oxide
17708-57-5	Diallate
23950-58-5	Pronamide
33089-61-1	Amitraz (BAAM)
42874-03-3	Oxyfluofen

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
PHASE I TECHNICAL INFORMATION

The development of a National Emission Standard for Hazardous Pollutants (NESHAP) is done in three phases. In Phase I, an assessment is made to determine whether a standard should be developed for the pollutant and processes under scrutiny. Emphasis is placed on gathering information about the pollutant, processes, and control equipment, as well as the technical business aspects of the industries involved. Phases II and III involve standard development, proposal, and promulgation. Much of the information gathered in Phase I is documented in an information memorandum with an attached technical report, which Clearinghouse users may find helpful. The following is a list of the source categories for which technical memoranda have been prepared. They can be obtained by contacting the Pollutant Assessment Branch, Strategies and Air Standards Division, Office of Air Quality Planning and Standards, U. S. EPA, Research Triangle Park, North Carolina 27711, (919) 541-5519 or FTS 629-5671.

Source Category	Pollutants
Styrene Butadiene Polymer Production	butadiene
Butadiene Production	butadiene
Polybutadiene Production	butadiene
Neoprene/Chloroprene Production	butadiene
Ethylene Dichloride Production	ethylene dichloride vinyl chloride monomer carbon tetrachloride trichloroethylene chloroform
Chlorine Production	carbon tetrachloride
Chlorofluorocarbon Production	carbon tetrachloride chloroform perchloroethylene
Chromite Ore Processing	chromium
Sewage Sludge Incinerators	chromium

Source Category	Pollutants
Municipal Incinerators	chromium
Cement Production	chromium
Refractory Production	chromium
Ferrochrome Production	chromium
Specialty Steel Production	chromium
Chromium Chemicals Production	chromium
Coal and Oil Combustion	chromium
Refinery Cooling Towers	chromium
Chrome Plating	chromium

APPENDIX C

ORDERING INFORMATION

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The National Academy Press was created by the National Academy of Sciences to publish reports issued by the Academy and by the National Academy of Engineering, the Institute of Medicine, and the National Council of Research, all operating under the charter granted to the National Academy of Sciences by the Congress of the United States.

An order form for the National Academy Press may be found at the end of this appendix. When ordering from the National Academy Press, use the ISBN number, the title, and the price shown in the citation. Some reports published by the Press do not have ISBN numbers. These reports are reproduced and bound individually as they are requested or "on demand." All orders for these reports must be prepaid, and no returns are permitted. Recorded book information may be obtained by calling (202) 334-2665.

Unless otherwise noted, orders should be mailed to:

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2101 Constitution Avenue, N.W.
Washington, D.C. 20418

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Many reports published by the National Academy Press are also available from the National Technical Information Services (NTIS). To order documents from NTIS, return the order form, found at the end of this appendix, indicating the publication number (PB number) along with payment to:

National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

NTIS prices for documents are indicated in each entry by a price code for paper copies (PC) and for microfiche (MF). The Price Code Schedule for 1986 appears on page C-7.

NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH

There are three possible sources for ordering NIOSH publications: NIOSH, the Government Printing Office (GPO), and the National Technical Information Service (NTIS). The NIOSH citations indicate the order number and price for each source from which the particular document is available.

Citations labeled "AVAIL NIOSH" were available as of January 31, 1986, free of charge by contacting:

NIOSH Publications
4676 Columbia Parkway
Cincinnati, Ohio 45226
(513) 841-4287

Quantities available from NIOSH are limited or may no longer be available.

Documents may be ordered from GPO by contacting:

Office of Superintendent of Documents
U. S. Government Printing Office
Washington, D.C. 20402

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U. S. ENVIRONMENTAL PROTECTION AGENCY AND NATIONAL CANCER INSTITUTE

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The Federal Register notices announced by EPA are available from the U. S. Government Printing Office. The charge for each issue is $1.50. To order, contact:

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WORLD HEALTH ORGANIZATION

World Health Organization publications are available from:

WHO Publications Center, USA
49 Sheridan Avenue
Albany, New York 12210
(518) 436-9686
Attention: Ms. Kay Krause

All orders for WHO publications must be prepaid. Prices are shown in each citation. For postage and handling, add $1.25 for the first publication ordered and $0.15 for each additional publication. Prices are subject to change without notice.

As of July 31, 1984, IARC Scientific Publications are available only from:

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ORDERING OPTIONS: All Regular demand orders are shipped First Class Mail or equivalent service to all U.S. addresses. (For First Class Mail or equivalent service to Canadian and Mexican addresses add $3 per item; for all other addresses add $6 per item.) You may also elect Express or Rush Service. For a $20 per item charge your Express order will be processed within 24 hours and delivered by overnight courier. For a $10 per item charge your Rush order will be processed within 24 hours and mailed First Class Mail (or equivalent) or you may pick up your Rush order at NTIS within 24 hours for a $7.50 per item charge. *A Shipping and Handling fee must be applied to all Regular orders, but does not apply to Express, Rush or subscription orders.

USE THIS SECTION ONLY IF YOU KNOW THE DOCUMENT NUMBER. IF YOU ARE ORDERING BY TITLE, TURN THE PAGE.

	NTIS ORDER NUMBER	USER ROUTING CODE (see reverse)	QUANTITY: Paper Copy	QUANTITY: Micro-fiche	QUANTITY: Other (specify)	UNIT PRICE	PRIORITY MAIL SERVICES	TOTAL PRICE
1								
2								
3								
4								
5								
6								
						Shipping and Handling Fee ($3 domestic/$4 foreign)		
						Grand Total		$

METHOD OF PAYMENT

☐ Charge to NTIS Deposit Account No. _ _ _ _ _ _

☐ Check/money order enclosed for $ _____

☐ Billing Charge (see reverse for restrictions and explanation)

Employer identification number: _ _ _ _ _ _ _ _ _ (9 digits)

Purchase Order No. _____

Charge to my ☐ American Express ☐ VISA ☐ MasterCard

Account No. _____ Expiration Date _____

Signature: _____

(Required to validate ALL orders)

USE MEDIA CODES

The two or three letters at the end of NTIS Order Numbers have been placed there to help NTIS marketers determine the most effective media in bringing various types of information to users' attention. Please use the media codes when ordering. The information they provide is very helpful to NTIS and to its' user community.

(REV 10-85)

USER ROUTING CODE: NTIS can label each item for routing within your organization. If you want this service put your routing code in the box marked USER ROUTING CODE (Limit eight characters).

BILLING SERVICE: This service is restricted to North American business locations for an extra $7.50 per order (or per Custom Search). The business employer identification number plus the phone number of the office paying the bill are required to process these requests. A late payment charge will be applied to all billings more than 30 days overdue.

FOR TELEPHONE ORDERS, CALL THE NTIS SALES DESK—703/487-4650.

ORDERING MAGNETIC TAPE: (check mode)

☐ 9 Track ☐ 800 bpi ☐ 1600 bpi ☐ 6250 bpi (odd parity)

ORDERING BY TITLE: Use this section if you do not know the document number, but you do know the title. Please give us as much information as you can to help us to fill your order correctly.

TITLE #1 Turn to other side. Please write "1" in the NTIS Order Number block and complete the rest of the line.

Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location)	Personal Author	

TITLE #2 Turn to other side. Please write "2" in the NTIS Order Number block and complete the rest of the line.

Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location)	Personal Author	

TITLE #3 Turn to other side. Please write "3" in the NTIS Order Number block and complete the rest of the line.

Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location)	Personal Author	

TITLE #4 Turn to other side. Please write "4" in the NTIS Order Number block and complete the rest of the line.

Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location)	Personal Author	

TITLE #5 Turn to other side. Please write "5" in the NTIS Order Number block and complete the rest of the line.

Sponsor's Series #	Contract or Grant Number of Report	Date Published
Originator (Give specific laboratory, or division and location)	Personal Author	