

United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park, NC 27711

EPA-450/2-91-009
February 1992

Air



STATUS OF SELECTED AIR POLLUTION CONTROL PROGRAMS -- FEBRUARY 1992



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AIR POLLUTION CONTROL PROGRAMS

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U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Research Triangle Park, NC 27711

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INTRODUCTION

This collection of status reports has been prepared in order to provide a timely summary of selected EPA air pollution control activities to those individuals who are involved with the implementation of these programs. Persons with general questions or those who wish to receive additional copies of this report may contact Denise Gerth, Office of Air Quality Planning and Standards, Environmental Protection Agency (MD-15), Research Triangle Park, NC 27711, telephone number (919) 541-5550 or FTS 629-5550. Persons with specific questions on particular program activities are requested to call the contact person shown on the individual status report.

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NORTHEAST OZONE TRANSPORT COMMISSION

Background

Section 184 of the Clean Air Act (Act) establishes an ozone transport region in the Northeast extending from the Washington, D.C., metropolitan area up to and including the State of Maine. The Act also establishes a Commission for this area composed of the Governors (or their designees), State air pollution control officials (appointed by the Governors), the Administrator (or his designee), and the Environmental Protection Agency's (EPA) Regional Administrators (or their designees). (The Administrator and Regional Administrators are nonvoting members.)

The Administrator was required to convene the Commission by May 15, 1991. The Commission's basic charge is to assess ozone transport in the region, assess strategies for mitigating transport impacts, and recommend to the Administrator additional measures needed to solve the interstate transport problems.

Current Status

The first meeting of the Commission was held on May 7, 1991 in New York City. This meeting followed several weeks of discussions among States and EPA that were aimed at identifying administrative and organizational issues related to the establishment and operation of the Commission. These early discussions allowed the members of the Commission to begin developing the structure and procedures of the Commission and to start discussing many important ozone transport issues at the May 7 meeting. The Commission elected an interim chair to serve until formal bylaws could be developed and adopted, and the Commission established five committees to begin investigating important issues related to the organization of the Commission and possible control strategies that might be needed in the Northeast.

The Commission held its second meeting on July 16, 1991 in Boston. The Commission formally adopted its bylaws and discussed possible actions regarding the California low emitting vehicle (LEV) program, early adoption of operating permit programs, guidance on enhanced inspection and maintenance programs, and various committee functions. Some of the Northeast States are already in the early stages of studying or adopting the LEV program, and other States on the Commission have agreed to consider such programs.

Future Milestones

The committees (stationary source strategies, mobile source strategies, modeling management, bylaws and organizational, and communications) will continue to meet on issues related to

NORTHEAST OZONE TRANSPORT COMMISSION (CONTINUED)

their charges. The Commission is also proceeding to establish the position of executive director, who will help facilitate the many Commission activities.

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DISCRETIONARY SANCTIONS CRITERIA RULEMAKING

Background

Section 179 of the Clean Air Act (Act) establishes mandatory sanctions the Environmental Protection Agency (EPA) must apply when it makes a finding, disapproval, or determination that a requirement of the Act has not been met. Section 110(m) provides

the Administrator the discretion to apply the highway and offset sanctions in section 179 on a shorter timetable (immediately), over a larger area (attainment as well as nonattainment areas), and for more types of deficiencies if he so desires. Section 110(m) limits this discretion in one situation: application of discretionary sanctions on a statewide basis. Section 110(m) directs EPA to promulgate criteria that the Agency will apply to ensure that sanctions are not applied statewide where one or more political subdivisions of the State are principally responsible for the deficiency on which the sanction is based. This rulemaking action would establish those criteria.

Current Status

The work group has completed a draft of the proposed rulemaking.

Future Milestones

Spring 1992 is the target date for the proposal.

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REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) FIX-UPS

Background

Section 182(a)(2)(A) of the Clean Air Act (Act) requires, for areas designated nonattainment and classified as at least marginal, that each State submit a revision to its plan to correct or adopt RACT requirements that were required under section 172(b) of the Act prior to enactment of the Act. This requirement only applies to areas that were designated nonattainment under section 107 prior to the Act. Newly-designated areas were not previously subject to the requirements of section 172(b). Areas in 31 States and the District of Columbia were designated nonattainment and classified as at least marginal by operation of law upon enactment.

These areas were required to submit corrections within 6 months of classification (i.e., by May 15, 1991). If the Environmental Protection Agency (EPA) finds that a State did not submit the required rules by the applicable deadline, one of the sanctions listed in section 179(b) must be imposed unless the RACT rules are submitted within 18 months after such a finding. If the rules are not submitted within 6 months after the first sanction goes into effect, the second sanction must be imposed. Available sanctions are highway funding sanctions and 2 to 1 offsets. The EPA is also required to promulgate a Federal implementation plan (FIP) within 2 years after a finding of failure to submit a plan.

Current Status

Twenty of the 31 States required to submit RACT corrections have submitted rules. The EPA will have to review these rules to determine whether the deficiencies have been corrected. For the remaining 11 States and the District of Columbia, EPA has notified the States of the finding of failure to submit rules, thus triggering the clock on sanctions and FIP's (see 56 FR 54554, October 22, 1991).

Future Milestones

The EPA plans to publish an advance notice of proposed rulemaking proposing a set of model volatile organic compounds RACT rules in early 1992.

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OUTER CONTINENTAL SHELF (OCS) RULES

Background

Section 801 of the Clean Air Act (Act) added a new section 328 which is titled: "Air Pollution from Outer Continental Shelf Activities." Section 328 transferred responsibility for the regulation of air pollution from OCS sources for all OCS planning areas, except the western and central Gulf of Mexico OCS planning areas, from the U.S. Department of Interior to the Environmental Protection Agency (EPA). Sources located within 25 miles of a State's seaward boundaries must comply with the same State/local air pollution control requirements as would be applicable if the source were located in the corresponding onshore area. Sources located more than 25 miles from the seaward boundary of a State boundary must comply with EPA air pollution control regulations. To comply with the requirements of section 328, EPA is proposing new regulations to control air pollution from OCS sources in order to attain and maintain Federal and State ambient air quality standards and to comply with the prevention of significant deterioration provisions of the Act. The regulations will require each owner or operator of a major new or modified OCS source, affected by the regulations, to prepare one-time-only construction permits before the owner or operator can begin construction of the source. These regulations will be codified as a new Part 55, Chapter I, Title 40 of the Code of Federal Regulations.

Current Status

The proposed rule was published in the Federal Register on December 5, 1991 (56 FR 63774).

Future Milestones

Publication of the final rule is now expected in May 1992.

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TITLE I GENERAL PREAMBLE

Background

The General Preamble is being developed to describe the Environmental Protection Agency's (EPA) policy and technical judgments related to implementing Title I provisions, primarily those concerning State implementation plan (SIP) submittals for nonattainment areas. It will provide advice to the States and other interested parties regarding what acceptable plan submittals must contain. The General Preamble also will serve as the basis for subsequent EPA approval or disapproval actions on SIP submittals. The General Preamble is not a regulation, but rather a notice of Agency policy. It does not supersede existing State regulations or approved SIP's and does not constitute final EPA action. The public will have an opportunity to comment on the individual SIP's developed by the States as well as issues addressed in the General Preamble as reflected in the SIP's.

The General Preamble discusses specific issues concerning the interpretation of the Title I requirements for nonattainment areas classified under Part D, Title I, as well as the treatment of nonattainment areas that fall outside of the classification schemes. While the Preamble focuses significant attention on ozone and carbon monoxide (CO), it also discusses requirements for the SIP submissions required for particulate matter, sulfur dioxide, nitrogen dioxide, and lead nonattainment areas. In addition, the General Preamble discusses interpretation issues that have arisen concerning redesignations to attainment, general SIP requirements under section 110, and EPA action on SIP submissions, as well as the various types of possible State failures to meet certain requirements and consequent sanctions. The scope of the General Preamble is the first 6-year period following enactment.

Current Status

On June 25 and 26, 1991, a public meeting was held in Reston, Virginia, for the purpose of obtaining input from the public and affected parties on issues related to the new requirements for ozone and CO nonattainment areas and relating how these issues are addressed in this document. Approximately 100 people attended the meeting, including representatives from the State and local agencies, industry, and environmental groups. The public was given the opportunity to submit written comments through July 26, 1991.

Future Milestones

The EPA has reviewed the comments and is preparing responses and revising the General Preamble to reflect these responses.

TITLE I GENERAL PREAMBLE (CONTINUED)

The revised General Preamble is scheduled for publication in the Federal Register in early 1992.

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OZONE/VOLATILE ORGANIC COMPOUNDS (VOC)/NITROGEN OXIDES (NO_x)
ENHANCED MONITORING

Background

Title I of the Clean Air Act (Act) requires the enhanced monitoring of ozone and ozone precursors since ozone continues to constitute one of the most pervasive national air pollution problems. Proposed regulations would modify the monitoring requirements of 40 CFR Part 58 to obtain a more comprehensive and representative data base on ozone and ozone formation. The rules will enhance existing requirements for monitoring ozone and NO_x, and establish new requirements for monitoring VOC and meteorological parameters. Both the enhanced monitoring and new requirements will apply only to certain ozone nonattainment areas designated as either serious, severe, or extreme. The rule will address, among other things, the location, minimum number of monitors per area, and the sampling frequency for each pollutant. The rule will ensure national consistency and efficacy in the operation of these enhanced monitoring networks.

Current Status

The draft rulemaking proposal package was reviewed by the Environmental Protection Agency's Standing Air Monitoring Work Group and by the informal work group established for development and review of this package.

Future Milestones

The proposed rule is scheduled to be published in the Federal Register during January 1992. Promulgation of the final rule is scheduled for July 1992. Six months after promulgation, or redesignation and reclassification of an area to serious, severe, or extreme ozone nonattainment, the affected State will need to submit an enhanced ozone monitoring network description, including a schedule for implementation, to the Administrator. One year after promulgation (or redesignation and reclassification of an area to serious, severe, or extreme ozone nonattainment), the affected States will need to have the first site installed and operational. The complete, operational network will be phased in over a period of 5 years.

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SIGNIFICANT STATIONARY SOURCES OF CARBON MONOXIDE (CO)

Background

Section 187(c)(3) of the Clean Air Act (Act) of 1990 requires, within 6 months of enactment, guidance to be issued on determining whether stationary sources contribute significantly to CO levels in an area. The intent of this guidance is to allow areas which are atypical, in that their CO problem comes largely from stationary rather than mobile sources, to have a control program more closely tailored to their needs. In such an area, greater stationary control is warranted, while the programs for control of mobile source emissions may not be appropriate or necessary.

Current Status

A memorandum which contains the guidance for determining whether stationary sources contribute significantly to CO levels in an area was issued on May 13, 1991, from William G. Laxton, Director, Technical Support Division, Office of Air Quality Planning and Standards, to the Environmental Protection Agency's (EPA's) Regional Office Air Division Directors. The Emission Inventory/Modeling Sub-Work Group of the Act Title I Work Group, which includes representatives from the Office of Air and Radiation; EPA Regional Offices; the Office of General Counsel; the Office of Planning, Policy and Evaluation; State air control agencies; the State and Territorial Air Pollution Program Administrators; and the Association of Local Air Pollution Control Officials, had reviewed the draft guidance and their comments were included in the final guidance memorandum.

The guidance states that the determination of whether stationary sources contribute significantly to CO levels in an area shall be accomplished by following the guidance and using the dispersion modeling techniques contained in the Guideline on Air Quality Models (Revised). If the results of dispersion modeling of one or more stationary sources of CO in an area show any concentration in ambient air that is in excess of the CO national ambient air quality standards, then the area is considered to be an area where stationary sources contribute significantly to CO levels.

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JOINT ENVIRONMENTAL PROTECTION AGENCY (EPA)/NATIONAL ACADEMY OF
SCIENCES (NAS) REPORT ON OZONE AND PRECURSORS

Background

Section 185B of the 1990 Clean Air Act (Act) requires the EPA and the NAS to prepare a joint report reflecting results of a study on the role of ozone precursors in tropospheric ozone formation and control. The EPA expects a draft of this report to be available for public comment by March 15, 1992. A final version is expected to be sent to Congress by June 15, 1992.

Current Status

The NAS study was released in mid-December 1991.

Future Milestones

The NAS report and additional information are being reviewed by the EPA staff. The section 185B report will reflect EPA's additional analyses as well as the findings of the NAS report.

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REGIONAL OZONE MODELING/URBAN OZONE MODELING

Background

Regional ozone modeling is performed under contract for the Environmental Protection Agency (EPA), Office of Air Quality Planning and Standards (OAQPS), using the Regional Oxidant Model (ROM). Simulations performed with ROM are achieved in the Gridded Model Information Support System (GMISS). State agencies may access ROM air quality data, meteorological inputs, and biogenic emission estimates through the Urban Airshed Model (UAM) subsystem of GMISS.

The UAM is required for use in interstate moderate ozone nonattainment areas, as well as in more seriously polluted areas. Either UAM or the Empirical Kinetic Modeling Approach may be used in intrastate moderate areas.

Current Status

The ROM has been updated to version 2.2. Bench mark runs have been completed to test whether ROM 2.2 performs satisfactorily. Capabilities exist to perform regional modeling east of longitude 99W (central Texas) and north of latitude 26N (slightly north of Miami). Three domains (Northeast, Southeast, Midwest) have been identified with this "Superdomain" to generate information to support urban scale modeling efforts by the States. Work has begun to construct emission scenarios for several projection years corresponding with estimates of nondiscretionary controls under the 1990 Clean Air Act (Act). Scenarios are being coordinated with the States. Preliminary coordination of proposed regulations and modeling protocols in the Northeast, Southeast, and Midwest have been completed with the EPA Regional Offices.

Users manuals have been completed for the UAM and for the GMISS UAM subsystem. A series of five "hands-on" UAM workshops have been held for States/EPA Regional Offices.

Future Milestones

Regional

- o Coordinate and complete Regional modeling protocols for the Northeast, Midwest, Southeast (winter 1991)
- o Completed and archived preliminary nondiscretionary Act scenarios for Northeast, Southeast, Midwest (fall 1991)
- o Completed matrix for Southeast national policy analyses (fall 1991)

REGIONAL OZONE MODELING/URBAN OZONE MODELING (CONTINUED)

- o Complete ROM base-case runs for episodes identified by Regional Offices/States, as needed, for attainment demonstrations (summer 1992)

Urban

- o Issued UAM State implementation plan application guidance (summer 1991)
- o Developed framework for tracking/trouble-shooting system, to assist States to stay on schedule (July 1991)
- o Begin workshops/assistance to help the States develop and implement urban modeling protocols (assistance begins in fall and beyond)
- o Distribute UAM performance evaluation system (March 1992)
- o Distribute enhanced UAM emissions preprocessor system (EPS) to assist the States in quality assuring data, making EPS more user-friendly, and making simulation of control strategies more flexible and less cumbersome (May 1992)
- o Distribute UAM quality assurance system (September 1992)
- o Distribute GMISS, volume 3, model concentration data retrieval subsystem (January 1992)
- o Distribute improved UAM post-processing system to the States [(including system to graphically display comparisons between predictions and observations (winter 1991)]

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CARBON MONOXIDE (CO)/VOLATILE ORGANIC COMPOUNDS (VOC)/NITROGEN
OXIDES (NOx) EMISSION INVENTORY GUIDANCE

Background

Title I of the 1990 Clean Air Act (Act) requires emissions inventories of VOC, NO_x, and CO for establishing a baseline in ozone nonattainment areas and inventories of CO emissions for CO nonattainment areas. The requirements of Title I continue and embellish many of the programs initiated under the previously-proposed, post-1987 ozone/CO policy (52 FR 45044). The Act also contains emission inventory development requirements that are new or that supersede those contained in the previous proposed policy.

Current Status

The following guidance has been developed to address the changed and new requirements for emission inventories.

- o Guidance for Initiating Ozone/Carbon Monoxide State Implementation Plan Emission Inventories Pursuant to the 1990 Clean Air Act Amendments - February 1991
- o Emission Inventory Requirements for Ozone State Implementation Plans - March 1991
- o Emission Inventory Requirements for Carbon Monoxide State Implementation Plans - March 1991
- o Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume 1: General Guidance for Stationary Sources - May 1991
- o Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume 2: Emission Inventory Requirements for Photochemical Air Quality Simulation Models - May 1991
- o MOBILE4.1 Model [software and documentation being issued by the Office of Mobile Sources (OMS)] - July 1991
- o Procedures for Emission Inventory Preparation, Volume 4: Mobile Sources (being issued by OMS) - July 1991
- o Personal Computer Version of the Biogenic Emissions Inventory System (PC-BEIS) with User's Guide - July 1991

CARBON MONOXIDE (CO)/VOLATILE ORGANIC COMPOUNDS (VOC)/NITROGEN
OXIDES (NOx) EMISSION INVENTORY GUIDANCE (CONTINUED)

- o Procedures for Preparing Emissions Projections -
July 1991
- o Quality Review of Inventories - September 1991

Future Milestones

Emissions inventory guidance still being developed within
the first year of the passage of the Act.

Emissions Statements - due January 1992

Guidance for Reasonable Further Progress Tracking - due
February 1992 through May 1992

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The Office of Air Quality Planning and Standards' publications
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MOTOR VEHICLE INSPECTION AND MAINTENANCE (I/M)

Background

The Clean Air Act Amendments (Act) give the Environmental Protection Agency (EPA) and the States specific directions regarding I/M programs. Section 182 deals with State implementation plan submittal requirements for "basic" and "enhanced" I/M programs. Currently there are 97 urban areas in 36 States with I/M programs.

Currently Operating I/M Programs

<u>Centralized Contractor Operated</u>	<u>Centralized State/Local Operated</u>	<u>Decentralized Computerized Analyzers</u>	<u>Decentralized Manual Analyzers</u>	<u>Anti- tampering Only Inspection</u>
Arizona Connecticut Illinois Indiana Florida Kentucky: Louisville Maryland Minnesota Ohio: Cuyahoga County Tennessee: Nashville Washington: Seattle Spokane Wisconsin	Delaware District of Columbia New Jersey Oregon Tennessee: Memphis	Alaska: Anchorage Fairbanks California Colorado Georgia Massachusetts Michigan Missouri Nevada New Hampshire New Mexico New York North Carolina Pennsylvania Texas: Dallas El Paso Utah: Salt Lake Provo Davis County Virginia	Idaho Rhode Island	Kentucky Cincinnati suburbs Louisiana Ohio Oklahoma Texas: Houston

Current Status

In April 1991, EPA published a draft guidance document for both basic and enhanced I/M programs. The guidance was designed to inform State I/M program officials in ozone and carbon monoxide (CO) nonattainment areas of requirements in establishing or revising I/M programs. A proposed rule is scheduled for publication in the Federal Register in February 1992. One focus of the guidance development process is the cost and benefit of three new testing methods that appear to offer an opportunity to

MOTOR VEHICLE INSPECTION AND MAINTENANCE (I/M) (CONTINUED)

greatly increase the hydrocarbons, CO, and nitrogen oxide emission reductions compared to conventional I/M: transient tailpipe testing, fuel system pressure testing, and canister purge flow testing.

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TRANSPORTATION CONFORMITY

Statutory Requirement

The Clean Air Act requires that the Federal government shall not support or approve any activity which does not conform to an approved State implementation plan. No metropolitan planning organization shall approve any transportation plan, program or project which does not conform to the applicable implementation plan. The assurance of conformity is an affirmative responsibility of the Federal government agency.

EPA Deliverable

The Environmental Protection Agency (EPA) must publish regulations, with the concurrence of the Department of Transportation (DOT), which lay out the criteria and procedures for determining conformity.

Current Status

The EPA is working with the DOT to develop a notice of proposed rulemaking on the criteria and procedures. Interim conformity guidance was published June 7, 1991.

TRANSPORTATION CONTROL MEASURES

Statutory Requirement

The States must project growth in travel and offset emissions using transportation control measures as necessary. Severe and extreme ozone areas must require employers of 100 or more persons to reduce work-related trips.

EPA Deliverable

The EPA must produce guidance on forecasting vehicle miles traveled (VMT) by May 15, 1991, and must issue updated information on 16 broadly defined transportation control categories by November 15, 1991. The EPA is also preparing guidance for employer-based trip reduction strategies. A notice of availability is scheduled to be published in the Federal Register in late December of 1991.

Current Status

The VMT forecasting guidance has been drafted. Drafts of the 16 information documents have been circulated to the transportation and air quality planning communities for comment. Draft guidance on the employer-based trip reduction program has also been circulated for comment.

TRANSPORTATION CONFORMITY (CONTINUED)

TRANSPORTATION/AIR QUALITY PLANNING GUIDELINES

EPA Deliverable

Within 9 months of enactment (August 15, 1991), EPA must update the 1978 EPA/DOT guidelines on transportation/air quality planning.

Current Status

The draft guidelines have been circulated for comment. A notice of availability was published in the Federal Register in August 1991.

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MOBILE SOURCE MODELING

Background

Section 130 of the Clean Air Act (Act) calls for the Environmental Protection Agency (EPA), within 6 months after enactment, and at least every 3 years thereafter, to review and revise as necessary the emission factors used to estimate the emissions of carbon monoxide (CO), volatile organic compounds (VOC), and oxides of nitrogen (NO_x) from mobile sources. These emission factors are embodied in what is known as the MOBILE series of computer programs, the latest of which is MOBILE4.1. The MOBILE4.1 is an integrated set of FORTRAN 77 routines for use in the analysis of the air pollution impact of gasoline- and diesel-fueled highway mobile sources. The MOBILE4.1 calculates emission factors for gasoline light-duty vehicles, light-duty trucks, heavy-duty trucks, and motorcycles; as well as diesel light-duty vehicles, light duty trucks, and heavy-duty trucks.

Current Status

The MOBILE4.1 updates and supersedes MOBILE4. The MOBILE4.1 is to be used in the preparation of the motor vehicle portion of all 1990 base year emission inventories required by the Act. The MOBILE4.1 may also be used for projection year CO inventories.

Most of the revisions that have been made to the model affect the emission factor estimates for all estimation years. For example, the basic emission rates for 1981 and later model year light-duty gasoline-fueled vehicles and trucks have been updated using test results obtained since the release of MOBILE4 in 1989.

The EPA's intent in developing MOBILE4.1 was to make all revisions and updates that would assist in making the 1990 base year emission factors, and hence mobile source inventories, as accurate as was possible. Several new features were added to MOBILE4.1. In addition, several other features were significantly revised.

New Features

- o Oxygenated fuels affect all gasoline-fueled vehicle types in all model years. The model now handles the effects of commingling oxygenated with nonoxygenated gasoline fuels and the effect of fuel volatility waivers for oxygenated fuels for each of the following fuel types.
 - Gasohol - Gasoline blended with alcohol

MOBILE SOURCE MODELING (CONTINUED)

- Ether Blends - Gasoline blended with methyl tertiary butyl ether (MTBE) or ethyl tertiary butyl ether (ETBE)
- o Separate exhaust hydrocarbons (HC) emission factors are now calculated for the following.
 - Total HC (THC)
 - Nonmethane Hydrocarbons (NMHC)
 - Nonmethane Organic Gases (NMOG)
 - VOC
 - Total Organic Gases (TOG)
- o Since MOBILE4 was developed to provide emission factors for an entire urban area on a daily basis, and since the photochemical grid models expected to be used by several areas in developing their attainment demonstrations require finer spatial and temporal resolution, MOBILE4.1 prints evaporative emissions separately by type.
 - Hot Soak (g/event)
 - Diurnal (g)
 - Crankcase (g/mi)
 - Running Losses (g/mi)
 - Refueling (g/gal)

Note: Emissions that occur during vehicle refueling and, to a lesser extent, of spillage losses.

- Resting (g/hr)

Note: Resting loss emissions result from vapors permeating parts of the evaporative emission control system (rubber hoses, carbon canister).
- o New CO Standards
 - Tier I light duty vehicle (LDV) and light duty truck (LDT) standards
 - Cold temperature LDV and LDT standards

Note: These cold temperature standards represent the first time that tailpipe emissions have been controlled at non-Federal test procedure (FTP) conditions. (All emissions reductions are assumed to come from the cold-start portion of the FTP.)

MOBILE SOURCE MODELING (CONTINUED)

Significantly Revised Features

- o Vehicle fleet characteristics
 - Extended to 25 years mileage accumulation by age distributions
 - Altered registration by model year distributions to represent 1990 calendar year
 - Updated LDV and LDT dieselization rates
 - Varied vehicle mix by calendar year
- o Incorporated pass/fail purge/pressure effects on evaporative emissions
- o Updated tampering emission rates to reflect new survey data as well as account for the phaseout of leaded fuel; in addition, localities are now allowed to use local tampering rate where available
- o Updated speed correction factors with new data on 1981 and later model year vehicles and new California Air Resources Board and EPA data in the 48-65 mph test range

The model was released for both IBM-class and Macintosh personal computers. Both source and object code were provided to EPA Regional Offices. An updated, stand-alone users guide, as well as example input and output files, were also provided. The model was released in late July 1991.

Future Milestones

The EPA intends to continue its work on updating and improving the emission factor model. The next release, MOBILE5, is scheduled to be completed in the first half of the calendar year 1992. The use of MOBILE5 will be required for the development of most projection year VOC inventories.

The focus of MOBILE5 development will be on incorporating future year requirements of the Act. Among the Act requirements expected to be included are the Tier I exhaust standards and the revisions to the evaporative emission test procedures. Other influences on in-use emissions that are under consideration for inclusion in the model are the effects of fuel sulfur content on exhaust emissions, the effects of fuel oxygen content on exhaust HC and NO_x emissions, and the effects of reformulated gasolines on all types of emissions (exhaust, evaporative, running loss, and refueling).

MOBILE SOURCE MODELING (CONTINUED)

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ADOPTION OF CALIFORNIA VEHICLE STANDARDS

Background

Section 177 of the Clean Air Act (Act) allows any State with State implementation plan (SIP) provisions approved under Part D to adopt and enforce California motor vehicle emission standards and take other actions that would otherwise be preempted by section 209(a) if certain conditions are met. The conditions are that States adopt standards: (1) identical to California's, (2) for which a (section 209) waiver has been granted, and (3) with a 2-year minimum lead time.

Current Status

In November 1990, New York issued final regulations adopting the California standards for model year 1993 and later vehicles. These standards are essentially identical to the Federal Tier I standards.

Several States, including New York, have expressed interest in the adoption of the California Low Emission Vehicles (LEV) standards which will begin to be phased-in in California in model year 1994. The amount of progress and the level of activity among these States varies greatly.

Future Milestones

The EPA has no specified role under section 177 in the process by which States adopt California standards. The EPA will continue to monitor section 177 adoption efforts and to answer inquiries from parties involved in these efforts. Additionally, EPA must review all requests for SIP credits allowed for adopting California standards.

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TECHNICAL GUIDANCE FOR PM-10
REASONABLY AND BEST AVAILABLE CONTROL MEASURES

Background

Section 190 of the Clean Air Act (Act) requires EPA to develop technical guidance on reasonably available control measures (RACM) and best available control measures (BACM) for three area source categories: residential wood combustion (RWC), urban fugitive dust, and prescribed silvicultural and agricultural burning. The Environmental Protection Agency (EPA) is required to develop the guidance by May 15, 1992. Areas in nonattainment for particulate matter nominally 10 micrometers or less (PM-10) in size that are classified as moderate or serious are required to adopt RACM and BACM, respectively, in their State implementation plans (SIP's).

Current Status

To enable the States to develop their moderate area PM-10 SIP's which were due on November 15, 1991, EPA had to issue RACM guidance prior to the statutory deadline. On April 2, 1991, EPA issued a memorandum entitled "PM-10 Moderate Area SIP Guidance: Final Staff Work Product" which cited four documents as containing guidance on what are technically and economically feasible measures. They are Guidance Document for Residential Wood Combustion Emission Control Measures, Control of Open Fugitive Dust Sources, Prescribed Fire Smoke Management Guide, and Prescribed Fire Plan Guide.

The EPA formed task forces to help with developing each of the BACM guidance documents. The task forces' membership consists of the EPA core work group members, individuals representing the affected sources, and non-EPA air quality personnel who would be implementing BACM.

Future Milestones

The EPA is considering issuing a technical information document (similar to a control techniques document), and a policy guidance document for each of the three BACM projects. The technical information documents will be available by the May 15, 1992 statutory deadline.

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TECHNICAL GUIDANCE FOR PM-10
REASONABLY AND BEST AVAILABLE CONTROL MEASURES (CONTINUED)

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GUIDANCE ON PM-10 AND LEAD EMISSION INVENTORIES

Background

The Clean Air Act (Act) established the requirements for emission inventories in nonattainment areas for all criteria pollutants, particulate matter nominally 10 micrometers or less (PM-10), and lead [Title I, section 172 (c)(3)]. The Act requires that a comprehensive, accurate, current inventory of actual emissions be produced and periodically updated. Although there is existing guidance for PM-10 inventories, this guidance needs to be updated to conform to the Act and to take advantage of recently developed inventory techniques and concepts.

Current Status

A contractor effort has been initiated to review existing inventory guidance, including the considerable body of work done in support of ozone and carbon monoxide, and the Act requirements. When the review is completed, the contractor will develop specific guidance for PM-10 and lead emission inventories.

Future Milestones

A total of four emission inventory guidance documents will be produced for PM-10 and lead by December 1991. These documents are: (1) Emission Inventory Requirements for PM-10, (2) Emission Inventory Requirements for Lead, (3) Emission Inventory Procedures for PM-10 and Lead, (4) Quality Review Guidelines for PM-10 and Lead Emission Inventories. These documents will fully define for State and local agencies the information that needs to be contained in their emission inventories, how to do the emission inventories, and how the Environmental Protection Agency will evaluate the emission inventories when they are submitted. This set of documents will be used to develop and evaluate PM-10 and lead inventories due after November 1991.

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SURFACE COAL MINE STUDIES

Background

Section 234 of the 1990 Clean Air Act Amendments requires the Environmental Protection Agency to review and revise, as necessary, surface coal mining emission factors and air quality models to ensure that neither the emission factors nor models significantly over predict particulate matter emissions.

Current Status

Studies are currently under way to determine which emission factors, if any, need to be revised and what emission testing should be undertaken to revise factors. Similarly, studies are under way to determine what changes, improvements or revisions are needed for air quality models.

Future Milestones

Future activities will be to implement emission factor and/or model development activities as indicated by current studies.

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NEW SOURCE REVIEW (NSR) PROGRAM

Background

New major stationary sources of air pollution and major modifications to major stationary sources are required by the Clean Air Act (Act) to obtain an air pollution permit before commencing construction. Permits for sources in attainment areas are referred to as prevention of significant air quality deterioration (PSD) permits, while permits for sources located in nonattainment areas are referred to as nonattainment area (NAA) permits. The current Federal NSR regulations implement the requirements of the Act as codified at 40 CFR 51.165, 51.166, and 52.21.

The Act contains new nonattainment NSR provisions in Title I while new PSD provisions are located throughout several different titles. The Act makes many important changes to the requirements for NSR permitting, therefore, the NSR regulations must be revised by both the Environmental Protection Agency (EPA) and the States to implement the new requirements. For example, for NSR permitting in nonattainment areas there are new major stationary source size thresholds, varying emissions offset ratios, and nitrogen oxides requirements for ozone nonattainment areas. The NSR requirements for ozone nonattainment areas also apply in ozone transport regions. The PSD program changes include an exemption from Federal PSD applicability for the hazardous air pollutants listed under section 112(b)(1) and the extension of PSD applicability to boundary changes at Class I areas.

Current Status

An EPA work group that includes representatives of State and local agencies is developing rules to codify the NSR requirements of the Act for federally-implemented NSR programs and for the adoption of State implementation plans. The EPA is also preparing guidance, for use by the States to develop their NSR rules, that identifies the NSR program requirements as mandated by Title I.

Future Milestones

The Federal rulemaking to implement the NSR-related requirements of the Act is scheduled for proposal in June 1992 with promulgation expected in April 1993. The Act requires States to include the new nonattainment NSR provisions in their rules by May 15, 1992 for sulfur oxides and nitrogen dioxide nonattainment areas; June 30, 1992 for PM-10 nonattainment areas; November 15, 1992 for ozone nonattainment areas; and for most carbon monoxide nonattainment areas no later than 3 years from the date of the nonattainment designation. For the new NSR

NEW SOURCE REVIEW (NSR) PROGRAM (CONTINUED)

nonattainment requirements of Title I, the EPA intends to assist the States in their NSR rule adoption by providing NSR program guidance in the General Preamble for Implementing the Title I Requirements, which is scheduled for publication in early 1992.

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COST-EFFECTIVENESS GUIDANCE

Background

Section 183(d) of the Clean Air Act (Act) requires that the Environmental Protection Agency (EPA) issue guidance " . . . to the States to be used in evaluating the relative cost-effectiveness of various options for the control of emissions from existing stationary sources of air pollutants which contribute to nonattainment of the national ambient air quality standards for ozone." In addition, the Agency has stated, as one of its goals, that the implementation of the Act will rely heavily on market-based principles. Developing control strategies based on application of cost-effectiveness principles is one example of applying market-based principles.

Current Status

The EPA plans to implement section 183(d) statutory requirements by: (1) issuing a guidance document, and (2) providing the analytical tools for implementation of the guidance.

First, a guidance document was issued in December 1991 on fundamentals, illustrations, applications of cost-effectiveness in formulating control strategies, and a bibliography of cross references used in preparing cost analysis and implementation of cost-effectiveness analysis.

Second, the Agency, with contract support, will provide software for installation on a personal computer, including users' documentation for the State Emission Reduction and Cost Model (ERCAM), to the Regional Offices to develop control strategies for their own particular area.

Future Milestones

We are planning to present Regional Office workshops (at one or two sites) in March 1992 to provide a tutorial on the State ERCAM analytical tool for implementation of the cost-effectiveness guidance. Present candidates for these workshops are Atlanta and Chicago.

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ECONOMIC INCENTIVE PROGRAM RULES

Background

The Clean Air Act (Act) mandates that States include economic incentive programs in their plans upon certain milestone and/or attainment failures in extreme ozone and serious carbon monoxide nonattainment areas [sections 182(g)(5), 187(d)(3), 187(g)]. In addition, economic incentive programs are one of three options required of States upon failure to meet a further progress milestone in serious and severe ozone nonattainment areas [section 182(g)(3)]. Under section 182(g)(4) of the Act, the Environmental Protection Agency (EPA) is required to publish rules to guide States in the development of such programs.

In addition, beyond mandated programs, the Act explicitly allows for the use of economic incentive programs in the general State implementation plan (SIP) provisions, in the provisions for nonattainment SIP's, in the provisions for consumer/commercial products rules, and in Federal implementation plans. The EPA intends that the economic incentive program rules will serve as guidance for these voluntary applications of economic incentives as well as for the mandated applications.

Current Status

A work group with broad participation has been formed, including EPA, the Regions, and State and local agencies. Key policy issues have been identified and are currently being debated within the work group. A broad menu of economic incentive strategies has been developed, with applicability to stationary, area, and mobile sources.

Future Milestones

To encourage early public input on these rules, a public meeting was held on October 8, 1991 to solicit public input on the key policy issues which will guide rule development. These public comments will be incorporated into the preamble and program rules to be proposed in April 1992.

In conjunction with the program rules, model plan provisions and guidance will also be developed. These model provisions will highlight a few promising incentive strategies that could be further developed by the States or that might be included in any Federal implementation plans that may be required.

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INNOVATIVE REGULATORY STRATEGIES PROGRAM

Background

The Environmental Protection Agency's (EPA's) Office of Air Quality Planning and Standards (OAQPS) has initiated a broad, long-range program to develop and demonstrate innovative regulatory strategies. The primary focus is on strategies that are potentially applicable for meeting ozone and carbon monoxide reasonable further progress milestones. The program is intended to promote the incorporation of such strategies into both mandated and discretionary rules and guidance documents prepared by EPA. A broader goal of the program is to encourage and facilitate adoption of effective market-based strategies or other innovative types of control by States through their State implementation plans.

Current Status

This program will focus on sponsoring a national workshop on economic incentives and market-based strategies to be held on January 15-17, 1992 in Washington, D.C. The workshop will primarily be structured around a series of case studies, with panel discussion groups to focus on dealing with the practical implementation and enforcement issues associated with the particular strategies highlighted in the case studies. Planning and preparation for this workshop is now under way, with OAQPS and EPA's Office of Policy, Planning, and Evaluation serving as co-sponsors.

Future Milestones

Beyond the January 1992 workshop, activities will include studies to further develop a broad range of innovative strategies. This will include evaluating the applicability of the strategies (as a function of air quality, source category, administrative, and legal parameters); framing and addressing the difficult administrative and enforcement issues associated with implementing such strategies (beyond those issues addressed in the 1992 workshop); designing "model programs" for the most promising strategies; and participating with the States and local agencies in developing and implementing demonstration projects.

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REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)/
BEST AVAILABLE CONTROL TECHNOLOGY (BACT)/
LOWEST ACHIEVABLE EMISSION RATE (LAER) CLEARINGHOUSE

Background

The RACT/BACT/LAER Clearinghouse was established to assist State and local air pollution control agencies in selecting RACT, BACT, and the LAER controls for new or modified sources in a nationally consistent manner. The Clean Air Act (Act) added RACT to the Clearinghouse. Prior to that time, it was called the BACT/LAER Clearinghouse.

Goals and Objectives

The basic goals of the RACT/BACT/LAER Clearinghouse are to: (1) provide State and local air pollution control agencies with current information on case-by-case technology determinations that are made nationwide, and (2) promote communication, cooperation, and sharing of control technology information among permitting agencies.

Current Status

- The RACT/BACT/LAER Information System (BLIS) is user-friendly and available to all Clearinghouse users who have access to a PC equipped with communication software and a modem. Menus and help screens allow the user to search, view, and print customized BLIS reports by entering the following command at the "ready" prompt on the National Computer Center's (NCC) IBM Computer.

EXEC 'CON5.BLIS'

Direct commands using the system 2000 language can still be made by selecting the appropriate menu option.

- The 1991 edition of the RACT/BACT/LAER Clearinghouse publication is a supplement to the 1990 edition which was a 5-year compilation of data. This edition, RACT/BACT/LAER Clearinghouse: A Compilation of Control Technology Determinations, First Supplement to 1990 Edition (EPA 450/3-91-015), was distributed to State and local air pollution control agencies in August 1991. It includes all determinations entered into the system since June 1990. Earlier determinations will continue to be available through BLIS and in the 1985 and 1990 compilation documents. State and local agencies may acquire additional copies free of charge by calling the Clearinghouse.

- A new form for submitting new determinations to the Clearinghouse was introduced in the July 1990 publication.

REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)/
BEST AVAILABLE CONTROL TECHNOLOGY (BACT)/
LOWEST ACHIEVABLE EMISSION RATE (LAER)
CLEARINGHOUSE (CONTINUED)

Information on the number of control options considered and the rank and cost effectiveness of the option selected have been added along with other minor changes. This new form should be used to submit new or revised determinations. If you need a copy of the form, call the Clearinghouse.

- Due to changes at the NCC, BLIS must be moved to a new data base management system by FY 1993. As a result, the Clearinghouse is implementing a 2-year program to accomplish this change. Alternative hardware and software options are currently being evaluated and a new data base management system will be selected by the end of FY 1991. The new system will be made operational by mid-summer 1992. These changes provide the opportunity to improve and expand BLIS to better serve our clients. Suggestions and comments for improving BLIS are welcome.

- The quarterly Control Technology Center CTC) News includes timely information on BLIS and new source review issues. The CTC News also addresses a wide range of emission and control technology issues.

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NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND
EMISSION GUIDELINES FOR
MUNICIPAL SOLID WASTE LANDFILLS

Background

Eighty percent of the garbage generated in the United States is disposed of in municipal solid waste (MSW) landfills. There are over 6,000 MSW landfills currently operating in this country. As garbage decomposes over time, these landfills will generate air emissions of concern. Landfill gas emissions contain nonmethane organic compounds (NMOC's) which contribute to ambient ozone problems and are a source of air toxics; methane emissions contribute to global climate change and can cause fires and explosions at or near landfills.

The Environmental Protection Agency (EPA) proposed NSPS and emission guidelines (EG) to control air emissions from MSW landfills on May 17, 1991. The proposal was published in the Federal Register on May 30, 1991 (56 FR 24468).

The proposal would require affected facilities [MSW landfills equal or greater than 100,000 Mg (111,000 tons) in design capacity and emitting 150 Mg/yr (167 tpy) of NMOC's] to place an active gas collection system and an add-on control device to control their landfill gas emissions. The basis of regulation is an open flare, as cited in Title 40 of the Code of Federal Regulations, section 60.18. Alternative control devices such as gas turbines, internal combustion engines, and boilers are allowed if they meet 98 percent destruction efficiency of NMOC's or 20 ppmvd NMOC's at the outlet. A performance test for alternative controls is required.

This is a major rule; the total cost of control is \$240 million a year for existing landfills and \$26 million for new landfills constructed in the next 5 years. However, this is a result of using flares as the basic control device. The EPA is strongly encouraging energy recovery and there will be landfill owners/operators who will be able to decrease their total costs of control if they elect to use the alternative controls.

The EPA estimates about 9-10 percent of the currently operating MSW landfills and about 9 percent of new landfills constructed in the next 5 years will be affected by this rule, many of which will be the large landfills. The EPA also estimates that the proposal would achieve a 78 percent emission reduction of NMOC's and a 52 percent emission reduction of methane.

NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND
EMISSION GUIDELINES FOR
MUNICIPAL SOLID WASTE LANDFILLS (CONTINUED)

Current Status

Comments received on the proposed rule are being considered for promulgation.

Future Milestones

The current schedule calls for promulgation of the NSPS and EG by October 1992

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NEW SOURCE PERFORMANCE STANDARDS (NSPS) FOR
SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI) -
REACTOR PROCESSES

Background

The SOCMI is a large source category that was ranked first on the priority list of 59 source categories for which NSPS are to be developed. Reactor processes comprise one of three SOCMI process vent emission source categories for which the Environmental Protection Agency (EPA) is developing standards (the other two are air oxidation processes and distillation operations). Final NSPS for SOCMI air oxidation and distillation operations were promulgated on June 29, 1990, and the NSPS for reactor processes was proposed on the same date.

The scope of the NSPS for reactor processes would apply to reactor processes producing any of a designated list of 173 high production volume chemicals. The volatile organic compounds (VOC) emissions from these chemicals are estimated to account for 90 percent of total VOC emitted by reactor processes. The NSPS is projected to reduce VOC emissions by about 2,100 mega grams per year in the fifth year after proposal.

The standards would require VOC emissions from reactor processes to be combusted by 98 weight-percent or to 20 parts per million by volume (ppmv), whichever is less stringent. The proposed standards, however, are purposely structured with a cutoff referred to as a total resource effectiveness (TRE) to encourage VOC emission reduction through relatively inexpensive process changes of reactor process operations and to require only those plants which can reduce VOC cost effectively to control their VOC emissions. Only those affected facilities with a TRE value of 1.0 or less would be required to combust their VOC emissions by 98 weight-percent or to 20 ppmv. Alternatively, an owner or operator could maintain the TRE of an affected vent stream above 1.0 by improving the product recovery efficiency of the stream and not have to install combustion control.

Current Status

The NSPS for reactor processes was proposed on June 29, 1990. No one requested a public hearing. The end of the comment period was September 12, 1990. Comments received during this comment period are currently being considered for promulgation.

Future Milestones

The current schedule calls for promulgation of the NSPS for reactor processes by March 1992.

NEW SOURCE PERFORMANCE STANDARDS (NSPS) FOR
SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI) -
REACTOR PROCESSES (CONTINUED)

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TANK (MARINE) VESSEL STANDARDS

Background

Under Title I of the Clean Air Act (Act), the Environmental Protection Agency (EPA) is required to promulgate regulations by November 1992 to control volatile organic compounds and other pollutant emissions from the loading and unloading of marine vessels. Facilities are to comply with the requirements by no later than November 1994.

Additionally, Title III of the Act requires the Agency to address the emissions of 190 toxic pollutants from all sources.

Current Status

Work is in progress to develop Federal standards that would satisfy the requirements of both Title I and Title III. Draft chapters addressing the industry profile, national emissions, available emissions control technology, and control costs were distributed for comment in October 1990. Draft regulatory alternatives were presented to the public in January 1991.

Future Milestones

The next milestones include the completion of the draft background document, completion of the regulatory alternatives, and development of the proposal package.

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CONTROL TECHNOLOGY GUIDELINES FOR VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS

Background

The Clean Air Act (Act) (Title I, section 183) requires the issuance of control techniques guidelines (CTG's) for 11 categories of stationary sources of VOC emissions for which such guidelines have not been issued, specifically for aerospace coatings and solvents and shipbuilding operations and ship repair, within 3 years after the date of enactment. The 11 CTG's for which work is under way are: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts (business machines), plastic parts (other), offset lithography, industrial wastewater, auto body refinishing, SOCMI batch processes, volatile organic liquid storage, and cleanup solvents.

The purpose of a CTG is to recommend reasonably available control technology (RACT). The RACT is determined on a case-by-case basis. The CTG's provide a recommended presumptive norm for RACT. The States must adopt RACT for sources in nonattainment areas covered by the CTG's.

Current Status

The 11 CTG's are in various stages of development. The CTG's (except industrial wastewater and cleanup solvents) were presented as draft documents at a meeting of the National Air Pollution Control Techniques Advisory Committee (NAPCTAC) in November 1991. Industrial wastewater has already been presented to NAPCTAC. Cleanup solvents is still in the data-gathering phase. At the time of NAPCTAC, the documents were sent to industry, environmental groups, the State, and local agencies for comment. The comments are incorporated and a Federal Register (FR) notice announcing the draft for public comment will be made (about April 1992). The final document will be announced in the FR about June 1993. Cleanup solvents is on a slower schedule but will be completed by November 1993.

Work on aerospace and shipbuilding documents started in October 1991.

Work is currently under way on an alternative control technology document for pesticides application. This should be finalized by June 1992.

Future Milestones

SOCMI Distillation/Reactor CTG - Announced for public comment
9/91

CONTROL TECHNOLOGY GUIDELINES FOR
VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS (CONTINUED)

Remainder of "11 CTG's" (except Cleanup Solvents):

NAPCTAC - 11/ 1991
Draft FR notice - 4/92
Final FR notice - 6/93

Cleanup Solvents

Draft FR notice - 9/92
Final FR notice - 11/93

Aerospace and Shipbuilding CTG's

Final CTG required by 11/93

Pesticide Information Document

Draft ACT - 1/92
Final ACT - 6/92

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CONTROL TECHNOLOGY GUIDELINES FOR
VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS (CONTINUED)

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BEST AVAILABLE CONTROL MEASURES (BACM) DOCUMENTS FOR PLYWOOD,
PARTICLEBOARD, WAFFERBOARD, AND LUMBER MANUFACTURING

Background

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to provide guidance to State and local agencies for control of particulate matter nominally 10 microns or less (PM-10) emissions from both point and area sources. Legislative authority requiring the EPA to identify reasonably available control measures (RACM) and best available control measures (BACM) is located in section 190 "Issuance of RACM and BACM Guidance," of the Act. Section 189(b)(1)(B) requires that States implement BACM through their State implementation plans (SIP's) for serious nonattainment areas.

For various industries, the EPA has decided to develop control technology documents that identify BACM for stack sources and process fugitive sources at these industries. Best available control technology (BACT) is defined in the Act of 1977 as:

" . . . an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any pollutant which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of this Act."

For the purposes of this project, this definition of BACT will be adopted for BACM.

The purpose of this project is to develop documents that identify control measures for PM-10 emissions from plywood, particleboard, waferboard, and lumber manufacturing. The documents are being written to support the States in developing their SIP's. Specific emission sources to be investigated include screening, grinding, drying, pressing, sanding, and trimming.

The BACM documents review existing information and data concerning the technology and cost of various control techniques, including pollution prevention techniques, to prevent or reduce emissions. The documents are, of necessity, general in nature in that they do not fully account for site-specific variables within

BEST AVAILABLE CONTROL MEASURES (BACM) DOCUMENTS FOR PLYWOOD,
PARTICLEBOARD, WAFERBOARD, AND LUMBER MANUFACTURING (CONTINUED

a stationary source category. Consequently, the purpose of a document is to provide State and local air pollution control agencies with an information base for proceeding with their own analysis of BACT wherein they can consider site-specific factors.

Current Status

The project began in April 1991. To date, a literature search has been completed, telephone contacts have been made, and plant visits are being arranged.

Future Milestones

The final draft document is scheduled for completion by the end of January 1992.

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NITROGEN OXIDES (NO_x) ALTERNATIVE CONTROL
TECHNIQUES (ACT) DOCUMENT

Background

Section 183(c) of Title I of the Clean Air Act (Act) requires that ACT documents be prepared on all stationary source categories that emit greater than 25 tons per year of NO_x. These documents must be completed within 3 years of the enactment of the Act.

Current Status/Future Milestones

A preliminary list has identified 60 source categories with NO_x emissions greater than 25 tons per year. A first draft ACT document for gas turbines was sent for external review in August 1991. The ACT document for nitric/adipic acids was sent for external review in September 1991. The next two categories for which ACT's will be prepared are internal combustion engines and process heaters at petroleum refineries.

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BEST AVAILABLE CONTROL MEASURES (BACM) DOCUMENTS FOR ALUMINUM AND
FERROUS (GRAY IRON AND STEEL) FOUNDRIES

Background

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to provide guidance to State and local agencies for control of particulate matter nominally 10 microns or less (PM-10) emissions from both point and area sources. Legislative authority requiring the EPA to identify reasonably available control measures (RACM) and best available control measures (BACM) is located in section 190, "Issuance of RACM and BACM Guidance," of the Act. Section 189(b)(1)(B) requires that States implement BACM through their State implementation plans (SIP's) for serious nonattainment areas.

For various industries, the EPA has decided to develop control technology documents that identify BACM for stack sources and process fugitive sources at these industries. Best available control technology (BACT) is defined in the Act as:

" . . . an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any pollutant which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of this Act."

For the purposes of this project, this definition of BACT will be adopted for BACM.

The purpose of this project is to develop documents that identify control measures for PM-10 emissions from aluminum foundries and ferrous (gray iron and steel) foundries. The documents are being written to support the States in developing their SIP's. Specific emission sources to be investigated include electric induction furnaces, hot metal pouring, and mold shake out. A separate document will be developed for each foundry type.

The BACM documents review existing information and data concerning the technology and cost of various control techniques, including pollution prevention techniques, to prevent or reduce

BEST AVAILABLE CONTROL MEASURES (BACM) DOCUMENTS FOR ALUMINUM AND
FERROUS (GRAY IRON AND STEEL) FOUNDRIES (CONTINUED)

emissions. The documents are, of necessity, general in nature in that they do not fully account for site-specific variables within a stationary source category. Consequently, the purpose of a document is to provide State and local air pollution control agencies with an information base for proceeding with their own analysis of BACT wherein they can consider site-specific factors.

Current Status

The project began in March 1991. To date, several draft chapters of each document have been completed.

Future Milestones

The final draft document is scheduled for completion by the end of December 1991.

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BACKGROUND BEST AVAILABLE CONTROL MEASURES (BACM) DOCUMENTS FOR
SECONDARY ALUMINUM PLANTS

Background

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to provide guidance to State and local agencies for control of particulate matter nominally 10 microns or less (PM-10) emissions from both point and area sources. Legislative authority requiring the EPA to identify reasonably available control measures (RACM) and BACM is located in section 190, "Issuance of RACM and BACM Guidance," of the Act. Section 189(b)(1)(B) requires that States implement BACM through their State implementation plans (SIP's) for serious nonattainment areas.

For various industries, the EPA has decided to develop control technology documents that identify BACM for stack sources and process fugitive sources at these industries. Best available control technology (BACT) is defined in the Act as:

". . . an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any pollutant which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of this Act."

For the purposes of this project, this definition of BACT will be adopted for BACM.

The purpose of this project is to develop a document that identifies control measures for PM-10 emissions from secondary aluminum plants. The document is being written to support the States in developing their SIP's. Specific emission sources to be investigated include raw material receiving and handling operations, sweat furnaces, scrap metal crushing and screening, scrap metal drying, smelting operations, hot dross handling and cooling, fluxing and degassing, hot metal pouring, and slag disposal.

The BACM documents review existing information and data concerning the technology and cost of various control techniques, including pollution prevention techniques to prevent or reduce

BACKGROUND BEST AVAILABLE CONTROL MEASURES (BACM) DOCUMENTS FOR
SECONDARY ALUMINUM PLANTS (CONTINUED)

emissions. The documents are, of necessity, general in nature in that they do not fully account for site-specific variables within a stationary source category. Consequently, the purpose of a document is to provide State and local air pollution control agencies with an information base for proceeding with their own analysis of BACT wherein they can consider site-specific factors.

Current Status

The project began in March 1991.

Future Milestones

The final draft document is scheduled for completion by the end of December 1991.

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REPORT TO CONGRESS ON CONSUMER AND COMMERCIAL PRODUCTS

Background

The failure of over 100 metropolitan areas in the United States to attain the national ambient air quality standards (NAAQS) for ozone is one of the major environmental issues currently faced by the Environmental Protection Agency (EPA). While most of the large, stationary sources of volatile organic compounds (VOC's) emissions are covered by existing regulations, individually small, dispersed sources of VOC's (area sources) contribute significantly to the continuing ozone nonattainment problem. One substantial source of VOC emissions is the use of a wide range of consumer and commercial products (personal care products, automotive products, architectural coatings, pesticides, cleanup solvents, etc.), presently the single largest stationary area source of unregulated VOC emissions.

The Clean Air Act (Act) requires the EPA to conduct a study of emissions of VOC's into the ambient air from consumer and commercial products. The objectives of the study are (1) to determine the potential of consumer and commercial product VOC emissions to contribute to ozone levels which violate the NAAQS for ozone; and (2) to establish criteria for regulating categories of consumer and commercial products under the authority of section 183 of the Act. Upon completion of the study, and not later than 3 years after enactment of the Act (i.e., by November 1993), the EPA must submit a report to Congress that documents the results of the study. Upon submission of the final report to Congress, the EPA must list those categories of consumer or commercial products that have been determined, based on the study, to account for at least 80 percent of the VOC emissions, on a reactivity-adjusted basis, from consumer and commercial products in areas that violate the NAAQS for ozone. The list must be divided into four groups establishing priorities for regulations based on the criteria presented in the report. Every 2 years after promulgating the priority list, the EPA must promulgate regulations for one group of categories until all four groups are regulated.

The many products that are considered to be consumer and commercial products differ greatly (e.g., application methods, packaging, contribution to ozone formation, control measures, efficacy of substitute or reformulated products, applicability of various systems of regulation, etc.). Given the diverse nature of these product categories, the study and resultant report to Congress will be separated into several individual studies and corresponding reports. In addition to the individual product category studies, several generic studies will be conducted. These generic studies will address such subjects as listed.

REPORT TO CONGRESS ON CONSUMER AND COMMERCIAL
PRODUCTS (CONTINUED)

1. A national inventory of VOC's in consumer/commercial products
2. Methods for the required adjustment of VOC emissions to account for the relative photochemical reactivity of product constituents
3. The fate of VOC's that enter landfills or are discharged to wastewater
4. Aerosol packaging systems
5. Market-based approaches for regulating VOC emissions from consumer/commercial products

Current Status

During FY 1990, in anticipation of passage of the Act, the EPA initiated work on several product category and generic studies. These initial studies addressed the following.

1. A national inventory of VOC's in consumer/commercial products
2. Fate of VOC's in landfills
3. Fate of VOC's in wastewater
4. Aerosol packaging systems
5. Underarm deodorants/antiperspirants
6. Aerosol spray paints

During FY 1991, work continued on the initial studies, and new work was initiated for hair care products and automotive products. The remaining categories to be studied include household cleaners, pesticides, adhesives and sealants, and room deodorants. A draft aerosol packaging systems report was submitted to industry for peer review in April 1991. Draft reports for the deodorants/anti-perspirants study and the two fate studies will undergo industry review during the last quarter of FY 1991. An information collection request (ICR) for a survey of VOC's in traditional consumer products is scheduled to be submitted to the Office of Management and Budget (OMB) in February 1992.

REPORT TO CONGRESS ON CONSUMER AND COMMERCIAL
PRODUCTS (CONTINUED)

Future Milestones

First work group mailout (quarterly thereafter)	12/91
Submit ICR for consumer products survey to OMB	2/92
Consumer products survey mailout (4,000 respondents)	4/92
Draft survey results	7/92
Draft inventory report	9/92
Final work group mailout	12/92
Work group closure meeting	3/93
Brief Assistant Administrator	4/93
Submit report package to OMB	6/93
Submit final report to Administrator	11/93
Submit report to Congress	11/93

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TRIBAL TREATMENT AS STATE (TAS) REGULATION

Background

Section 107 sets criteria for how an Indian tribe may be treated as a State for most purposes under the Clean Air Act (Act). Approval of a TAS rule is a necessary step for subsequent approval of tribal air quality codes under section 110 of the Act.

Current Status

The Office of Program Management Operations is heading a work group with assistance of designated Regional Offices, the Office of Air Quality Planning and Standards, the Agency Indian Coordinator, and the Office of General Counsel as core members of this work group.

Future Milestones

The work group is in the process of finalizing work group membership to include State and tribal representation. Regional Offices are reviewing available attainment/nonattainment information to determine the scope of the tribal air quality problem. A draft TAS rule is anticipated in early 1992.

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TRIBAL IMPLEMENTATION PLAN (TIP) GUIDANCE

Background

Section 107 of the Clean Air Act (Act) adds several provisions to the statute that create the first express authority for the Environmental Protection Agency (EPA) to treat Indian tribes as States for certain Act purposes. Section 107 also allows a tribe that qualifies for treatment as State (TAS) to develop and submit to EPA a TIP to be reviewed in accordance with the provisions set forth in section 110 of the Act, except as otherwise provided in section 301(d)(2). Section 107 further states that EPA may promulgate regulations setting forth the elements of TIP's and procedures for EPA action on them.

Current Status

An initial work group has been formed and has met twice to discuss the issues surrounding TIP development. It is EPA's plan to develop a TIP guidance rather than to promulgate regulations. The Act does not require development of a TIP guidance by a set date, however, it is the Agency's intention to have a TIP guidance in place when the TAS regulation is promulgated, or shortly thereafter. The Act states that EPA shall promulgate regulations by May 15, 1992 specifying those provisions of the Act for which it is appropriate to treat tribes as States.

Future Milestones

Under the auspices of the TAS work group that is charged with development of the TAS regulation, EPA will define the elements of TIP's and develop procedures for EPA action on them.

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MOTOR VEHICLE ANTITAMPERING

Background

The 1989 Environmental Protection Agency (EPA) tampering survey showed that tampering and fuel switching rates remain high. Tampering and fuel switching continue to adversely impact the quality of the Nation's air. The 1990 survey results are not yet available.

1989 SURVEY RESULTS (percent)

	<u>NON-I/M*</u>	<u>ATP** Only</u>	<u>I/M + ATP</u>
Overall Tampering	25	10	15
Fuel Switching	9	2	3

* I/M = inspection and maintenance

** ATP = antitampering program

Current Status

The 1990 EPA tampering survey was completed in August 1990. The report is currently being drafted. The 1991 survey began in April in Atlanta, Georgia. The other survey sites for 1991 include Birmingham (AL), Dallas (TX), Albuquerque (NM), Stockton (CA), Santa Cruz (CA), Kansas City (MO), Dayton, Chicago, Pittsburgh, New Jersey, Nashua (NH), Portland (ME), Minneapolis, and Ogden (UT).

The Clean Air Act (Act) changed the law to prohibit emission control system tampering even by individual vehicle owners. Another change is that manufacturing, selling, or installing any part or component where the principal effect of the part or component is to bypass, defeat, or render inoperative any emission control device or element of design, is specifically prohibited.

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MOTOR VEHICLE EMISSIONS WARRANTIES

Background

There are two emissions warranties that manufacturers are required to provide motor vehicle owners. The Clean Air Act's (Act's) section 207(a) defect warranty requires manufacturers to warrant that their vehicles are free from defects which would cause emission nonconformities. The section 207(b) performance warranty requires that manufacturers pay for repairs necessitated by the failure of an Environmental Protection Agency (EPA) approved State or local inspection and maintenance program emissions short test. The purpose of the Federal emission control warranties is to encourage manufacturers to build durable emission control systems and to assure that vehicles will meet emission standards throughout their useful lives. Pamphlets which give guidelines on which parts and systems should be covered by the warranties and how to obtain coverage are available.

The section 207(a) defect warranty requires manufacturers to repair or replace any failed defective part or system which would cause the vehicle or engine to exceed Federal emissions standards free of charge for the useful life of the vehicle or engine (5 years or 50,000 miles, whichever comes first, for passenger cars). This warranty applies to all motor vehicles manufactured to meet U.S. emission standards since 1972, including cars, light-duty trucks, heavy-duty trucks, and motorcycles.

As mentioned above, the section 207(b) performance warranty covers all repairs necessary to pass a locally required emissions test for the first 2 years or 24,000 miles, whichever comes first. After expiration of the 2 years/24,000 miles period, the manufacturer is required to repair any primary emission control component free of charge for the remainder of the useful life (5 years or 50,000 miles). Only passenger cars and light trucks are covered by this warranty at the present time.

Current Status

A comprehensive warranty parts list has been established after meetings with the vehicle manufacturers. This list should enable vehicle owners to receive more consistent coverage and relieve EPA of some of the administrative burden associated with this program. A notice of proposed rulemaking may be published to codify the list of parts and clarify other issues regarding the defect warranty.

The Act does not affect these warranties until the 1995 model year. Beginning with the 1995 model year, the warranty period for passenger cars and light trucks will be 2 years or

MOTOR VEHICLE EMISSIONS WARRANTIES (CONTINUED)

24,000 miles, except for certain major emission components (such as catalytic converters, electronic emissions control units, and onboard diagnostics systems) which are warranted for 8 years or 80,000 miles.

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FUEL VOLATILITY ENFORCEMENT

Background

Final regulations for the first phase of the nationwide Federal gasoline volatility program were issued in March 1989 to control volatility. On June 1, 1989, the first effective date of these regulations, the Environmental Protection Agency (EPA) began sampling gasoline at upstream facilities, such as refineries, terminals, pipelines, etc., in several cities. On July 1, 1989, the effective compliance date for retail outlets, EPA began inspections at these facilities as well. The EPA, along with its contractor, procured and analyzed nearly 4,000 enforcement samples nationwide through the compliance period which ended September 15, 1989. During the compliance period, samples were taken from all the major refinery and importer locations and nearly all the major terminals and ozone nonattainment areas in the country. The results indicated an approximate 95 percent compliance rate.

On May 1, 1990, and on May 1, 1991, EPA again began inspections on the first day of volatility season. Although the required compliance levels have not changed, several changes have been implemented to streamline inspection procedures and thus enhance EPA's enforcement presence. The most significant change has been the implementation of a highly reliable and accurate field screening system which has resulted in the substantially reduced number of fuel samples that have to be packaged, shipped and analyzed. This has allowed inspectors to immediately identify noncomplying products and conduct more well-directed investigations while still in the area and thus more quickly have high volatility gasoline removed from commerce. This streamlined process allowed EPA and its contractor to take over 10,000 volatility samples in 1990, with the same number planned for 1991.

Current Status

The EPA has continued to vigorously enforce the volatility regulations. The compliance rate continues to be in the range of 95 percent. Upcoming proposed regulations would allow the use of improved test procedures, which are both more accurate and quicker. In addition, regulations have been promulgated which will tighten volatility standards beginning with the 1992 volatility season.

The EPA will also use the data from previous years' enforcement programs to target problem areas or suppliers and thus enhance the effectiveness of its limited resources.

FUEL VOLATILITY ENFORCEMENT (CONTINUED)

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TAMPERING ENFORCEMENT

Background

The Environmental Protection Agency (EPA) tampering survey data indicate that the removal or rendering inoperative of emission controls remains a significant nationwide problem. Although State/local emissions inspection and antitampering programs have reduced some forms of tampering, the problem continues and has changed in some respects. The EPA, therefore, maintains an aggressive and somewhat refocused nationwide enforcement program.

In August 1986, EPA published an enforcement policy intended to encourage the development, introduction, and installation of reasonably priced aftermarket catalytic converters as an alternative to costly original equipment converters. Under this policy, the installation of converters designed to meet EPA specified performance requirements and installed under certain limited circumstances would not constitute tampering under the Clean Air Act (Act). This policy was intended to complement the recently instituted State/local antitampering programs by providing reasonably priced quality converters that would soon be required to be installed by thousands of vehicle owners.

The Act made the manufacture, marketing, and sale of "defeat devices" illegal. This greatly expands EPA's ability to enforce against those who manufacture products with significant detrimental effect on motor vehicle emissions. In addition, the Act made individuals liable for tampering with vehicles; the pre-amendment language only applied the tampering provision to manufacturers, dealers, fleet operators, and those engaged in the repair business.

Current Status

The EPA's nationwide tampering enforcement program utilizes EPA, contractors and authorized State/local inspectors. The EPA inspectors primarily focus on the largest and most complex investigations. In addition, the EPA very closely monitors the compliance of regulated parties with its published aftermarket converter policy. This oversight has resulted in EPA uncovering thousands of instances involving the installation of improper converters. Over 400 Notices of Violation have been issued to major violators of this policy for such misinstallations. In addition, EPA has also monitored the quality of the converters produced under this policy and has initiated enforcement actions against manufacturers whose products have not met the requirements of the policy.

The EPA has also been focusing on "high technology" forms of tampering. These include the marketing of high performance

TAMPERING ENFORCEMENT (CONTINUED)

replacement components such as computer chips, carburetors, camshafts, etc., and the recently growing business of post-sale, pre-delivery high performance modifications of new vehicles. Much of this enforcement is enhanced by the new defeat device language in the Act. The EPA continues to investigate the manufacture of catalytic converter replacement pipes and engine switching by regulated parties where the required emission controls are not installed.

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STAGE II AND ONBOARD VAPOR RECOVERY

Stage II Background

Section 182(b)(3) of the Clean Air Act (Act) requires all areas classified as moderate to severe to implement vapor controls at gasoline dispensing facilities (stage II controls). The Environmental Protection Agency (EPA) has been tasked with providing guidance on stage II systems and also with developing program enforcement guidance.

The Office of Air Quality Planning and Standards is preparing a technical information document on stage II systems and programs. Highlights of this document include background information, descriptions of the affected industries, emissions factors, system technology, costs, and implementation implications. The Office of Mobile Sources is preparing a document which establishes the minimum criteria for program oversight (enforcement). The enforcement guidance establishes criteria for training, identification of the affected parties, compliance monitoring through inspections and data review, and enforcement against violators.

Stage II Current Status

On June 28, 1991, the two draft guidance documents were distributed to selected parties for review and comment. The documents were finalized in November 1991.

Onboard Refueling Background

Section 202(a)(6) of the Act requires the promulgation of standards for vehicle onboard vapor controls within 1-year after the date of enactment of the Act. The Act states that these standards shall be promulgated by the Administrator, after consultation with the Secretary of the Transportation. The Act requires that this requirement be phased in beginning with the new passenger cars manufactured in the fourth model year, after the model year in which the standards are promulgated.

Onboard Control Status

A notice of proposed rulemaking was published in August 1987 which was followed by a lengthy public comment period. A report was issued by the National Highway Traffic Safety Administration in July 1991 on the safety issues of the onboard systems. A public hearing and reopening of the comment period was announced in August 1991. The public hearing was held on September 26, in Romulus, Michigan.

STAGE II AND ONBOARD VAPOR RECOVERY (CONTINUED)

EPA Contact Persons

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OXYGENATED FUELS

Background

The wintertime use of oxygenated gasolines is mandated by the Clean Air Act (Act) by November 1, 1992 in 41 areas throughout the country that are currently nonattainment for carbon monoxide. Congress has directed the Agency to issue regulations and guidelines pertaining to the implementation of these programs through State implementation plans (SIP's). The Environmental Protection Agency (EPA) is in the process of issuing regulations on gasoline labelling, guidance on the length of the programs to be implemented in each of the areas, and guidance concerning an oxygen credit averaging program. Congress has mandated that an average of 2.7 percent oxygen by weight be required in the gasoline sold in each of the nonattainment areas during the winter months.

Current Status

Over the past 6 months, the Agency has been using the innovative regulatory negotiation process to assist in its promulgation of a labelling regulation, as well as the various guidance documents dealing with oxygenated gasolines. One of these guidance documents deals with the proposed averaging and trading program for marketable oxygen credits, which will allow States to establish credit trading programs based on the oxygen content of the gasoline sold in any single nonattainment area. The use of gasolines with a higher oxygen content than 2.7 percent by weight will be permitted to offset the sale or use of gasoline with a lower amount of oxygen. A second set of guidance deals with the establishment of the control periods for the 41 areas required to have wintertime oxygenated gasoline programs. The Act has mandated control periods of no less than 4 months, while air quality data analyzed by the Agency have indicated that control periods across the country will range from 4 to 12 months.

On July 9, 1991, a proposed version of these guidance documents was published in the Federal Register, reflecting the options and issues as agreed upon by the Regulation Negotiation Advisory Committee. A public hearing on the proposed rule and guidance was held on July 15. In August 1991, the Regulatory Negotiation Advisory Committee reached an agreement in principle on the oxygenated fuels program. The EPA is drafting a supplemental proposal which embodies this agreement. This supplemental proposal is expected to be published in the Federal Register for public review and comment in January 1992. In December 1991, the Office of Mobile Sources issued a draft guidance for review pertaining to the implementation of the programs as outlined. This guidance will assist the States in

OXYGENATED FUELS (CONTINUED)

revising their SIP's and help to ensure that the oxygenated gasoline program is fully implemented by November 1, 1992.

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TIER 1 MOTOR VEHICLE EMISSION STANDARDS

Background

The current passenger car and light truck tailpipe emission standards for hydrocarbons, carbon monoxide, oxides of nitrogen, and particulate matter have been in place since the early to mid-1980's. It has long been recognized that such vehicles could meet tighter emission standards without the need for major technology advances. Thus, the Clean Air Act (Act) included revised certification tailpipe emission standards for all passenger cars and light trucks, commonly referred to as Tier 1 standards. The Tier 1 requirements are to be phased in beginning with the 1994 model year and will be fully phased in by the 1997 model year.

Current Status

The Agency published a final rule in the Federal Register on June 5, 1991 (56 FR 25724). The rule included the new certification emissions standards mandated by the Act, as well as standards for determining in-use compliance and liability for recall. Although the statute itself sufficed to implement these new in-use requirements, they are closely related to the Tier 1 standards, and thus were promulgated concurrently.

Future Milestones

All Agency requirements have been completed. Manufacturers must begin meeting the phase-in standards in model year 1994.

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CERTIFICATION SHORT TEST FOR MOTOR VEHICLES

Background

Motor vehicles in many areas of the country are required to undergo periodic emission tests, referred to as inspection and maintenance (I/M) tests, in order to be registered. Under certain vehicle operation and environmental conditions, some vehicles have a tendency to fail these short tests when, under more comprehensive testing, it can be shown that these vehicles have low emissions levels. Repairs on such error of commission vehicles neither contribute to air quality nor allow the vehicles to pass I/M on a retest, thus causing great inconvenience for owners while having no positive environmental effect.

The Clean Air Act (Act) mandated that the Environmental Protection Agency (EPA) add a test to the vehicle certification procedure that would determine whether passenger cars and light trucks can pass the I/M test procedures established by EPA under the range of fuel, ambient temperature, and vehicle wait-time conditions that can be reasonably expected to be encountered during I/M testing.

Current Status

The Agency is drafting a notice of proposed rulemaking that will address the certification short test requirement under a range of test conditions. In addition, the rule will include revisions to the six short tests approved by the Agency for use by I/M programs as part of the performance warranty program. These revisions were suggested by the Agency's January 1991 technical report and are included in this regulation as the basis for the certification short test procedure.

Future Milestones

The proposed rule will be published in February 1992.

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NONROAD ENGINES AND VEHICLES

Background

While emissions from on-highway motor vehicles have been regulated for 20, engines used to power nonroad equipment, such as lawnmowers, boats, and construction equipment, have not been subject to emission standards. The Clean Air Act (Act) added provisions to section 213, which require the Environmental Protection Agency (EPA) to:

1. Assess the impact of nonroad emissions on nonattainment and human health in a study completed in November 1991.
2. By November 1992, issue emission standards for nonroad sources, if nonroad sources as a whole are found to significantly contribute to nonattainment or endanger human health.

As these engines and vehicles have not been regulated, there is relatively little existing information on emissions from the engines, operating modes, test procedures, and technical feasibility of reducing emissions. California has issued standards for some categories of nonroad engines, although the Act preempts the States from regulating farm and construction equipment below 175 horsepower.

Current Status

Work is currently focused, primarily, on the study to assess the impact of nonroad emissions on nonattainment. A workshop was held in April 1991 to solicit input and data from manufacturers and the States. The study was completed in November 1991. A rulemaking addressing the applicable definition, such as "nonroad" and "farm and construction" is also being drafted and will be proposed in the early 1992.

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FEDERAL TEST PROCEDURE STUDY

Background

The Environmental Protection Agency (EPA) is responsible for enforcing the motor vehicle emission standards established under statutory authority. The various procedures used in the testing of motor vehicles to determine compliance with the standards are referred to, collectively, as the Federal Test Procedures (FTP). The Clean Air Act (Act) specifies, ". . . the Administrator shall review and revise as necessary the regulations . . . to insure that vehicles are tested under circumstances which reflect the actual current driving conditions under which motor vehicles are used, including conditions relating to fuel, temperature, acceleration, and altitude." The goal of the FTP study is to thoroughly assess the representativeness of the current FTP within the 18-month time limit imposed by the Act.

A key component of the study is a survey of in-use driving behavior planned for two nonattainment areas. This survey will provide data on current driving patterns which can be used to evaluate the representativeness of the present FTP driving cycle. Also, to evaluate the emissions impact of in-use driving patterns not represented by the FTP driving cycle, EPA is developing a vehicle simulation computer model. As part of this effort, EPA has established an in-house engine mapping program.

Current Status

Considerable preliminary work has been completed on the FTP study. Much of the computer model development work is finished and the engine mapping program is under way. Development of the driving pattern survey is in process, and it is scheduled to begin later this summer. The EPA is coordinating this work with similar efforts by California in the Los Angeles area and by the Office of Research and Development in Atlanta, Georgia. The study and final report is expected to be completed by May 1992.

EPA Contact Person

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ALTERNATIVE MOTOR VEHICLE DURABILITY PROGRAM

Background

During the certification process, manufacturers must demonstrate the ability of their new motor vehicles to satisfy the Clean Air Act (Act) mandate that vehicles meet emission standards for their useful lives. The primary objective of the durability program is to predict accurately the deterioration of vehicles in actual use. The challenge is to reasonably balance this goal against competing time and cost demands on both the Agency and the manufacturers.

Current Environmental Protection Agency (EPA) durability procedures for passenger cars and light trucks typically underestimate actual in-use deterioration and tend to be expensive. The primary purpose of revisions to the current procedures would be to improve the correlation between certification durability predictions and actual in-use durability. In addition, the inclusion of an "accelerated" durability option in the revised program--based, for example, on bench aging of selected components in place of whole-vehicle mileage accumulation--would reduce expenses and leadtime constraints on vehicle designs. The need for an accelerated durability option has been accentuated by the Tier 1 rulemaking, which increased the useful life of passenger cars from 50,000 to 100,000 miles.

Current Status

A public workshop was held in Ann Arbor on January 30, 1991 to consider options for revising portions of the certification procedures for new passenger cars and light trucks. A notice of proposed rulemaking is currently being prepared for an interim rule covering the 1994 and 1995 model years and is scheduled to be published in January 1992.

Future Milestones

A final rule for the 1994 and 1995 model years is scheduled to be published by June 1992. A more comprehensive rule for 1996 and later model years will follow.

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ONBOARD DIAGNOSTICS (OBD) FOR MOTOR VEHICLES

Background

Malfunctions of the emission control components on current computer controlled automobiles are known to cause significant increases in emissions without affecting driveability. Current estimates show that malfunctioning motor vehicles may contribute over 50 percent of light-duty vehicle volatile organic compounds and carbon monoxide emissions.

An emission control OBD system would detect malfunctions within the emission control system and alert the driver through a dashboard malfunction indicator light of the need for repairs. The OBD system would also facilitate proper repairs through storage of information about the malfunction which can be retrieved by repair technicians. The State of California required a first phase of OBD in the 1988 model year and recently promulgated rules for a second phase to be implemented in the 1994 model year. The Federal rules being developed for proposal are technically similar to the two California phases combined. The Clean Air Act mandates regulations requiring OBD systems to be installed on vehicles beginning with the 1994 model year. Final rules are required to be published by May 1992.

Current Status

On September 4, 1991, the Administrator signed a notice of proposed rulemaking proposing requirements that all passenger cars and light trucks be equipped with an OBD system capable of: (1) diagnosing malfunctions or deterioration of all emission-related systems or components, (2) alerting the vehicle operator to the need for repair, (3) storing information related to the malfunction, and (4) providing access to the stored information for maintenance and testing. A public hearing was held on November 6 and 7, 1991 in Ann Arbor, Michigan. The public comment period ended on December 9, 1991. The Environmental Protection Agency extended the comment period on the information requirements part of the rule until January 10, 1992 at the request of the commenters.

EPA Contact Person

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Background

Motor vehicles contribute the vast majority of all CO emissions. The Agency currently tests vehicles for compliance with emissions standards only in the 68-86 degrees Fahrenheit temperature range. Setting a cold temperature CO standard appears to be a cost-effective method of controlling motor vehicle emissions at colder temperatures. Such a standard could help local areas comply with the CO ambient air quality standard.

Current Status

EPA Contact Person

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MOBILE SOURCE AIR TOXICS ACTIVITIES

Background

Mobile sources account for somewhat over 50 percent of the annual U.S. cancer incidences due to emitted air toxics. Benzene and diesel particulate are the two most important mobile source toxics. Air toxics emissions can be reduced by reducing motor vehicle volatile organic compounds (VOC) emissions. Additional toxics reductions can be obtained by reducing the concentration of toxic components and their precursors in the fuel. The use of alternative fuels such as methanol, ethanol, and compressed natural gas in vehicles specifically designed for their use can result up to about a 90 percent reduction of air toxics emissions. Use of reformulated gasoline meeting specifications that lower fuel aromatic and benzene levels and that require the addition of oxygenate compounds such as methyl tertiary butyl ether or ethanol, will also reduce toxic emissions.

Current Status

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to issue a report in May 1992 on air toxics emissions from motor vehicles, focusing on compounds such as benzene, butadiene, and formaldehyde. The EPA is also required to promulgate either fuel or vehicle regulations by 1995, requiring necessary control of motor vehicle air toxics emissions.

Also, a number of other EPA regulatory programs required by the Act will result in reduction of air toxics emissions. The EPA is specifically required to issue regulations by November 1991, requiring use of reformulated gasoline in 1995 for the nine cities with the highest ozone levels. Reformulated gasoline will result in 15 percent reductions in air toxics and VOC emissions in 1995, increasing to 25 percent in 2000. Most other EPA programs required by the Act will also result in air toxics reductions. Diesel particulate emissions will be reduced by 1994 standards for heavy-duty vehicles adopted prior to the Act.

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MOTOR VEHICLE RECALL PROGRAM

Background

In 1990 and 1991, the Environmental Protection Agency (EPA) continued its compliance testing of in-use vehicles. The purpose of the program is to ensure that production vehicles continue to meet Federal motor vehicle emission standards during their useful lives.

Current Status

The EPA's motor vehicle recall program tested 50 passenger cars and light truck engine families in 1990. This includes 16 families tested under high altitude conditions in cooperation with the Colorado Department of Health. For the first half of 1991, 28 light-duty families have been tested, including 4 tested at high altitude. This testing had the dual purpose of repairing nonconforming vehicles and encouraging manufacturers to design more durable emission control systems to avoid the high cost of future EPA recalls. Approximately 3 million vehicles were recalled in 1990 and approximately 1 million have been recalled through the first half of 1991.

Future Milestones

The recall program plans to test approximately 39 light-duty families during the next 12 months. This will include about 7 families at high altitude. The EPA also plans to conduct in-use testing of 2 heavy-duty families, for the first time, during this period. If funding is provided, additional heavy-duty families will be tested.

EPA Contact Person

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MOTOR VEHICLE ASSEMBLY LINE TESTING

Background

In 1990, the Environmental Protection Agency (EPA) continued its Selective Enforcement Audits (SEA's) of assembly line motor vehicles. The purpose of the SEA program is to ensure that production vehicles meet Federal motor vehicle emission standards.

Current Status

In 1990, EPA conducted 8 SEA audits of light-duty (LD) configurations and 11 audits of heavy-duty engines (HDE). The LD audits showed satisfactory results; however, one HDE configuration exceeded the particulate emission standard, resulting in an audit failure.

During the first 6 months of 1991, EPA conducted 4 audits of LD configurations and 9 audits of HDE's. One HDE configuration failed the audit.

Since audit failures cause the interruption of production when the certification of a class is suspended, manufacturers continued to conduct substantial voluntary testing to identify and repair marginal configurations before they are audited. Manufacturers traditionally have tested about 20,000 LD vehicles during each year.

Futures Milestones

The EPA will continue to audit HDE and LD configurations of domestic and foreign manufacturers in proportion to their market shares and will focus on HDE families involved in the banking and trading program to assure correct usage of family emission limits.

The EPA will also continue to evaluate SEA's potential usefulness in a nonroad program and provide input during cold temperature carbon monoxide and certification short test rulemakings as to the appropriate role of SEA.

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REFORMULATED GASOLINE

Background

As part of the Clean Air Act (Act), Congress added a new subsection (k) to section 211. Subsection (k) prohibits the sale of gasoline that the Environmental Protection Agency (EPA) has not certified as reformulated in the nine worst ozone nonattainment areas beginning January 1, 1995.

To be certified as reformulated, a gasoline must comply with the following compositional requirements:

- oxygen content of at least 2.0 percent by weight,
- benzene content of no more than 1.0 percent by volume, and
- no heavy metals (with a possible waiver for metals other than lead).

Reformulated gasoline must also comply with emissions requirements. Nitrogen oxides emissions may not increase due to the reformulated gasoline. The gasoline must also achieve reductions in year round toxic and summertime volatile organic compounds emissions. These emission reductions must equal or exceed the more stringent of either a performance standard of 15 percent (in 1995 increasing to 25 percent in 2000) or the performance of a specified formula fuel, as measured on a mass basis from the entire vehicle.

The areas covered by the reformulated gasoline program are the nine ozone nonattainment areas having a 1980 population over 250,000 and having the highest ozone design value during the period 1987 through 1989, which include Baltimore, Chicago, Hartford, Houston, Los Angeles, Milwaukee, New York, Philadelphia, and San Diego. Any other ozone nonattainment areas may apply to opt into the program at the request of their Governor. The States of Rhode Island, Maine, and Massachusetts have already made such an application.

Current Status

Proposed regulations for reformulated gasoline were signed on June 11 and published in the Federal Register on July 9, 1991 (56 FR 31176). These proposals were developed in part through a regulatory negotiation process through the assistance of an advisory committee consisting of industry, environmental, and air pollution control and other government agency representatives. Negotiations continued through the end of June. In August 1991, the Regulatory Negotiation Advisory Committee reached an agreement in principle on the Reformulated Gasoline Program. A supplemental proposal which embodies this agreement is presently undergoing the Office of Management and Budget review.

REFORMULATED GASOLINE (CONTINUED)

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CALIFORNIA PILOT TEST PROGRAM AND
LIGHT-DUTY CLEAN FUEL VEHICLE STANDARDS

Background

The Clean Air Act (Act) requires the establishment of clean-fuel vehicles that will be used in clean-fuel vehicle programs to demonstrate the effectiveness of these vehicles in controlling air pollution in nonattainment areas. The California Pilot Test Program is one of these clean-fuel vehicle programs and requires vehicle manufacturers to sell a minimum number of light-duty, clean-fuel vehicles in the State of California starting in the 1996 model year. The program will also contain a provision that will allow other States with nonattainment areas to opt into the program, although no sales mandates of the clean-fuel vehicles for those States will be allowed. The standards for the light-duty, clean-fuel vehicles, which will be promulgated along with the California Pilot Test Program, will be used in both the California program and the Clean-Fueled Fleets Program.

Current Status

The proposed rule on the credit program to be used in the California Pilot Test Program was signed by the Administrator on September 5, 1991. The credit program is scheduled to be promulgated in March 1992. The proposed rule for the balance of the California Pilot Test Program (sales requirements and State opt-in), as well as the standards for light-duty, clean-fuel vehicles is being developed and is required to be promulgated by November 1992.

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IMPROVED VEHICLE EVAPORATIVE EMISSION CONTROL

Background

Even after gasoline volatility is reduced, current vehicle evaporative emission control systems are not designed to fully control evaporative emissions under certain common summer conditions. The most serious concerns are vapors generated and released during vehicle operation (running losses) on hot, ozone-prone summer days, as well as repeated days of parking on such days.

Current Status

On January 19, 1990, the Environmental Protection Agency (EPA) proposed a new evaporative test procedure designed to require more effective evaporative systems under more severe ambient conditions. Based on the input received at the public hearing and in the written comments in response to the proposed rule, EPA made various modifications to the test procedure, which were discussed at a public workshop on December 19, 1990.

Future Milestones

The EPA is considering the comments received and developing the final rulemaking package. Publication of the final rule is scheduled for May 1992.

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URBAN BUS REGULATIONS/HEAVY-DUTY NITROGEN OXIDES (NO_x) STANDARD

Background

The Clean Air Act (Act) contains several provisions relating to buses, including the following four items. First, the Act specifies that the 0.10 gram per brake horsepower-hour (g/bhp-hr) particulate matter (PM) standard should apply to 1993 model year "buses" [under the Environmental Protection Agency (EPA) regulations this standard applied to 1991+ urban buses]. Second, the Act specifies a new PM standard for 1994 and later model year urban buses which requires up to a 50 percent reduction from the current 1994 model year PM standard of 0.10 g/bhp-hr. Third, the Act includes provisions for the rebuilding or retrofitting of 1993 and earlier model year urban buses at the time of engine rebuild to improve their emissions performance. Fourth, the Act contains a requirement that the test procedure on which urban buses are tested should reflect actual in-use urban bus operating conditions.

In addition to the above mentioned bus programs, the Act also contains a revised 4.0 g/bhp-hr NO_x standard for all 1998 and later model year heavy-duty engines. The current standard of 5.0 g/bhp-hr will apply through the 1997 model year.

Current Status

The proposed rule was published in the Federal Register on September 24, 1991.

Future Milestones

The final rule is scheduled for publication in the spring 1992.

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DIESEL FUEL QUALITY

Background

The Environmental Protection Agency (EPA) promulgated heavy-duty motor vehicle particulate standards in the mid-1980's. The initial standards became effective with the 1988 model year, with more stringent standards being phased in with the 1991 model year and again in the 1994 model year. When these standards were promulgated, the heavy-duty engine manufacturers indicated that in order for them to meet these stringent standards, the sulfur and aromatic content of diesel fuel would need to be regulated.

In the summer of 1988, a joint industry proposal of the Engine Manufacturers Association and representatives of the petroleum industry, including the American Petroleum Institute, was submitted to EPA. This proposal recommended that EPA set an on-highway diesel fuel sulfur content limit of 0.05 percent and an aromatic cap of about 35 percent by setting a minimum cetane index of 40 to be effective in October 1993. In addition, the joint industry proposal recommended that EPA allow certification of 1991 to 1993 model year engines using 0.05 percent sulfur content diesel fuel.

In August 1989, EPA published a notice of proposed rulemaking (NPRM) which closely followed the joint industry proposal except that it proposed to allow 1991 to 1993 certification using 0.10 percent sulfur content diesel fuel. A public hearing was held in October 1989 and public comments were received on this proposal. Subsequently, a final rule was published in August 1990 which differed from the proposal in only two areas. As an alternative to the minimum 40 cetane index specification, refiners were permitted to certify a maximum aromatic content of 35 percent. Also, small refiners were given some additional regulatory relief in the form of a 2-year extension to the compliance schedule. This rule will provide additional particulate and sulfur dioxide reductions.

The Clean Air Act (Act) which was subsequently passed by Congress and signed by the President contains a section with provisions for Federal diesel fuel quality standards which is very similar to those in the final rule. The additional 2-year compliance extension for small refiners, however, was effectively prohibited by the Act. Consequently, a follow-up rulemaking to amend the rule to comply with the Act requirements is being undertaken. The NPRM for this rule was published on July 17, 1991.

Current Status

The EPA held a public hearing for this rulemaking on August 2, 1991, and the public comment period was open through

DIESEL FUEL QUALITY (CONTINUED)

September 3, 1991. A final rule is expected to be promulgated by early 1992.

EPA Contact Person

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CONTROL TECHNOLOGY CENTER (CTC)
FEDERAL SMALL BUSINESS ASSISTANCE PROGRAM

Background

The CTC was formed in 1987 to assist State and local (S/L) air pollution control agencies and the Environmental Protection Agency (EPA) Regional Offices in their implementation of programs to control air toxics, volatile organic compounds (VOC) and criteria pollutant emissions. It is operated by EPA's Office of Air Quality Planning and Standards (OAQPS) and the Office of Research and Development (ORD) and draws from the expertise of those two organizations. A State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) work group assures a close working relationship between STAPPA/ALAPCO and the CTC.

Three levels of support are provided - HOTLINE (for a rapid response to questions), direct engineering assistance (for more in-depth support to S/L agencies and Regional Offices), and technical guidance projects (for dissemination of information of broad national interest). The CTC also operates an electronic bulletin board system (BBS) on the OAQPS Technology Transfer Network and publishes a quarterly newsletter, the "CTC NEWS."

Section 507 of the Clean Air Act sets forth requirements for a Small Business Stationary Source Technical and Environmental Compliance Assistance Program (SBAP) to be established by each State. The EPA must also develop a Federal program to assist the States in the implementation of their programs, including providing guidance on alternative control technologies and pollution prevention. This Federal SBAP will be administered primarily through the CTC.

Status and Future Milestones

The CTC receives over 1,100 HOTLINE requests for assistance per year from State, local and Federal agencies. Private sector calls account for an additional 700 HOTLINE calls per year. Staff engineers and scientist of the supporting organizations receive an additional 1,000 direct (non-HOTLINE) telephone requests for assistance per year. HOTLINE calls are the common basis for initiating engineering assistance and technical guidance projects.

The CTC has completed 17 engineering assistance and 26 technical guidance projects since its inception. On-going projects include 3 engineering assistance and 18 technical guidance projects. A list of recently completed and on-going projects is provided in Table 1. Project reports are made available to all S/L agencies and Regional Offices without

CONTROL TECHNOLOGY CENTER (CTC)
FEDERAL SMALL BUSINESS ASSISTANCE PROGRAM (CONTINUED)

charge. They are available to others through the National Technical Information Service for a nominal fee.

The CTC bulletin board system (BBS) came on-line on August 1, 1991 and is one of several BBS's on the OAQPS Technology Transfer Network. The CTC BBS allows users to order CTC documents, download CTC developed software or project summaries, request assistance,

suggest projects and communicate via public and private messages. To access the CTC BBS, users need a PC, modem, and communications software. Telephone numbers and communication program settings are indicated below.

The "CTC NEWS" provides CTC clients with current information on control technology developments and CTC activities. To be put on the mailing list for the "CTC NEWS," call the CTC HOTLINE.

The Federal SBAP will consist of several components.

- A Small Business Technical Assistance Center (operated in coordination with the existing technical assistance centers) to provide technical guidance on control technology, pollution prevention, and chemical emergency prevention
- The consideration of small business needs and concerns in normal program activities (i.e., regulatory development), and preparation of informational materials to explain new regulations in layman's terms
- An information exchange network among the State small business programs and the various Federal offices involved in the small business program to coordinate development of "small business" materials

EPA Contact Persons

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Chuck Darwin	ORD	(919) 541-7633 (FTS) 629-7633
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<u>CTS HOTLINE</u>		(919) 541-0800 (FTS) 629-0800
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<u>CTC BBS</u>	(919) 541-5742 (1200/1400 baud) (FTS) 629-5742
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CONTROL TECHNOLOGY CENTER (CTC)
FEDERAL SMALL BUSINESS ASSISTANCE PROGRAM (CONTINUED)

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Data Bits: 8 Parity: N Stop Bits: 1

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TABLE 1.

ENGINEERING ASSISTANCE AND TECHNICAL GUIDANCE PROJECTS

<u>Project Name and No.</u>	<u>Completion Date</u>
Iron Oxide Process Emissions Analysis Pennsylvania	7/91
Vermont Wood Waste Incineration	8/91
Fluff Combustion	2/92
Perchloroethylene Waste Test Method Region I	3/91
Waferboard Plant Press Vent Emissions Colorado	12/90
Evaluation of Air Toxics Emissions at Minnesota's Reconstituted Panelboard Plants	4/91
HAP-PRO (Software to evaluate air toxics control options - formerly CAT 3.0)	7/91
HAP Manual Update	7/91
Assessment of VOC Emissions from Fiberglass Boat Manufacturing	5/90
Assessment of the Controllability of Condensable Emissions	12/90
Best Demonstrated Control Technology for Graphic Arts	1/91
Electrostatic Precipitator Model (89-13)	7/91
Sourcebook: NO _x Control Technology Data	7/91

CONTROL TECHNOLOGY CENTER (CTC)
FEDERAL SMALL BUSINESS ASSISTANCE PROGRAM (CONTINUED)

Polystyrene Foam Manufacturing	9/90
Bakers Yeast Manufacturing (90-6)	9/91
Radiation Cured Coatings	7/91
Radioactive and Mixed Waste Incineration Vol. 1, Control Technology Vol. 2, Risk of Radiation Exposure	5/91
Estimating Landfill Emissions (90-10)	12/90
Surface Impoundment Emission Factors Version 2.0 (SIMS Enhancement)(90-12)	11/90
Asphalt Roofing Emissions (90-14)	7/91
Automobile Spray Booth Clean-up	7/92
Burning Scrap Tires as a Fuel	11/91
Foundry Casting Operations	8/91
Carbon Disulfide Emission Controls	11/91
RACT NO ^X Controls for Utility Boilers	11/91
Emission and Control Options for Contaminated Soil	9/91
Simulated Open Burning Fiberglass	7/92
Simulated Controlled Burning of Scrap Rubber Tires	7/92
Ink and Coating Manufacturing	4/92
Nonferrous Metal Rolling	4/92
Waste Wood Combustion (Multi-Agency Study)	2/92

COMPREHENSIVE ASBESTOS MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT) STANDARDS

Background

The asbestos national emission standard for hazardous air pollutants (NESHAP) under the Clean Air Act (Act) are designed to reduce emissions of asbestos to the outside air. These regulations, which were initially promulgated in 1973, already affect a large number of sources. The current asbestos NESHAP will be revised under this project to reflect the MACT and procedures designed to reduce asbestos emissions. In addition to the asbestos NESHAP standards that are developed in the Office of Air and Radiation (OAR), the Office of Pesticides and Toxic Substances, the Office of Solid Waste and Emergency Response, and the Office of Water have regulations that also address asbestos emissions to the environment. Further, the Occupational Safety and Health Administration and the Department of Transportation have regulations that control asbestos releases. The OAR has and will continue to closely coordinate the development of these regulations within the Environmental Protection Agency (EPA) and with other Federal agencies.

Current Status

Several work group meetings were held for this project in 1990 to help define the source categories that would be considered in the project. A project status report was presented at the National Air Pollution Control Techniques Advisory Committee in January 1991. In March 1991, a decision was made to do a technical screening study to further define the source categories and to identify other hazardous air pollutants, besides asbestos, that may be emitted from the source categories. A draft of the screening study was prepared in June 1991 but the project is currently temporarily on hold due to the project team focusing on an asbestos technical study on roofing which is related to an asbestos NESHAP litigation.

Future Milestones

The project schedule is temporarily on hold. A revised schedule will be prepared when a decision on the scope of the project is made. The next milestone for this project includes finalizing the project scope, preparing the technical portion of the background information document (BID), and sending out the technical portion of the BID for outside review. It is expected that the asbestos NESHAP will be proposed in the fall of 1992 and promulgated the following year.

COMPREHENSIVE ASBESTOS MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
(MACT) STANDARDS (CONTINUED)

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CHROMIUM ELECTROPLATING MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY STANDARDS

Background

The source category is chromium electroplating and anodizing. Three processes are involved; hard chrome electroplating, decorative chrome electroplating, and chromic acid anodizing. The electroplating and anodizing are performed in chromic acid plating solutions. Chromic acid solution is primarily made up of hexavalent chromium, which is a known carcinogen. One process in decorative chrome electroplating uses trivalent chromium, which is less potent. There are about 5,000 operations nationwide, and at base line the chromium emissions are estimated to be about 170 tons/year. Control techniques include packed-bed scrubbers, advanced mesh-pad mist eliminators, chevron-blade mist eliminators, and fume suppressants (wetting agents in the bath or foam blanket at the surface of the bath). Trivalent chromium plating solution is also used as a control technique since it eliminates hexavalent chromium emissions, and trivalent chromium emissions are almost zero. Regulatory alternatives have been established for the three processes considering the appropriate control techniques. Nationwide impacts have been calculated for these regulatory alternatives. Based on these impacts, final determinations will be made as to which standard will apply to each of the processes.

Current Status

The work group has been briefed on the technical and regulatory aspects of this project. The nationwide impacts for various regulatory alternatives have been presented. In June 1991, one emerging technology was source-tested to determine its performance level. This will enable us in the determination of the standard for hard chrome electroplating.

Future Milestones

Option Selection	08/91
Work Group Closure	10/91
Proposal	02/92
Promulgation	02/93

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COKE OVEN MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT) STANDARDS

Background

The coke oven project has been ongoing since the late 1970's. The Environmental Protection Agency (EPA) proposed a standard for coke ovens in 1987, but the project was put on hold due to the anticipated Clean Air Act (Act) requirements. The standard sets emission limits for coke oven doors, lids, offtakes and seconds of charging. The Act requires EPA to set standards for MACT for existing sources, lowest achievable emission rate for existing sources, and MACT for new sources.

Current Status

The coke oven project is currently going through the option selection process. The work group has met and selected their options for the three standards outlined above and the Assistant Administrator for Air and Radiation has been briefed on these selections. The EPA is drafting the preamble and regulation, and is investigating an improved technology called the nonrecovery oven and obtained visible emissions readings there in July.

Future Milestones

Proposal in Federal Register
Promulgation in Federal Register

April 1991
December 1992

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DRY CLEANING NATIONAL EMISSION STANDARD FOR HAZARDOUS
AIR POLLUTANTS (NESHAP)

Background

The Environmental Protection Agency (EPA) is proposing to regulate perchloroethylene (PCE) and 1,1,1-trichloromethane (1,1,1-TCA) emissions from new and existing dry cleaners under authority of section 112 of the Clean Air Act (Act). Both PCE and 1,1,1-TCA are included on the list of 190 hazardous air pollutants found in section 112(b) of the Act. Both pollutants are emitted from dry cleaning facilities. The predominant solvent in use is PCE. Even though about 98 percent of these facilities emit less than 10 tons per year, and thus are considered area sources, there are an estimated 35,000 dry cleaning machines operating throughout the country. The use of 1,1,1-TCA is declining and only about 50 facilities are known to use this solvent.

As a result of a petition filed by a private citizens group from Oregon, the Administrator agreed to sign a proposed NESHAP for dry cleaning facilities by November 15, 1991, and to promulgate the NESHAP by November 1992.

A Federal Register notice announcing the withdrawal of the new source performance standards proposed on November 25, 1980 (45 FR 78174) for regulating volatile organic compounds emissions from dry cleaners under section 111 will be published at the same time the NESHAP is proposed.

Current Status

The proposal was published in the Federal Register on December 9, 1991.

Future Milestones

The final rule is scheduled for publication by November 15, 1992.

EPA Contact Persons

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HAZARDOUS ORGANIC NATIONAL EMISSION STANDARD FOR
HAZARDOUS AIR POLLUTANTS (NESHAP)

Background

The Clean Air Act (Act) requires that within 2 years of enactment, the Environmental Protection Agency promulgate emission standards for 40 source categories that emit one or more of the 190 hazardous air pollutants (HAP's) listed in the Act. As part of this effort, the Agency will develop the Hazardous Organic NESHAP (HON) rules. The standards will apply to the synthetic organic chemical manufacturing industry (SOCMI) and will control emissions of approximately 110 HAP's from process vents, storage, transfer, and wastewater operations. The negotiated equipment leak rule will be required for equipment containing HAP's and will control emissions of approximately 150 organic HAP's. Based on our characterization of SOCMI, there are about 400 chemical production categories that represent 80,000 to 90,000 gigagram (Gg) of production capacity and about 1,000 process units that will be affected by these rules. The HON will comprise five technology-based NESHAP standards, one for each of the following five emissions source types: process vents, wastewater handling and treatment operations, storage tanks, chemical transfer operations, and equipment leaks.

The control technology basis for these standards has been thoroughly studied in the development of similar standards in the past for process vents, equipment leaks, storage tanks and benzene waste and benzene transfer. These rules and data supporting them will be used to develop the regulatory alternatives and the standards for proposal.

Current Status

The proposed rulemaking package is presently undergoing the Office of Management and Budget review.

Future Milestones

The proposed rule is scheduled for publication in the Federal Register in the spring of 1992.

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EARLY REDUCTIONS PROGRAM

Background

The Clean Air Act (Act) contains a provision [section 112(i)(5)] which allows an existing source of hazardous air pollutant emissions to obtain a 6-year extension of compliance with an emission standard promulgated pursuant to section 112(d) of the Act, if the source has achieved a reduction of 90 percent or more of hazardous air pollutants emitted (95 percent or more for particulate pollutants) by certain dates specified in the Act. If a source is granted a compliance extension, an alternative emission limitation will be established for the source by permit to ensure the 90 (95) percent reduction.

The Environmental Protection Agency (EPA) will implement this program by issuing regulations which specify how owners or operators of hazardous air pollutant sources may apply for a compliance extension and procedures to be followed by reviewing authorities (EPA Regional Office or State agency) in evaluating compliance extension applications. The program is designed to be run by State agencies that have approved Title V permitting programs. However, since permit program approval may take several years, EPA will run the early reductions program in the interim.

Status

An EPA rule to implement the Early Reductions Program was proposed in the Federal Register on June 13, 1991 (56 FR 27338). Although the rule is not yet final, some companies will have to rely on the proposal to make submittals to EPA under the program within certain deadlines. The primary responsibility for evaluating early submittals resides with the EPA Regional Office. Nonetheless, EPA will give the States the opportunity to have input to the evaluation process from the outset.

Future Milestones

The final rule currently is scheduled to be published in February 1992.

EPA Contact Persons

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MUNICIPAL SOLID WASTE COMBUSTORS

Background

The Clean Air Act (Act) limited the scope of the existing new source performance standards (NSPS) and emission guidelines (EG) to individual municipal waste combustors (MWC) burning more than 250 tons per day of waste. The Act, however, directs the Environmental Protection Agency (EPA) to promulgate revised NSPS and EG for MWC burning more than 250 tons per day by November 15, 1991. The revised NSPS and EG are to be based on maximum achievable control technology (MACT). The Act also directs EPA to promulgate NSPS and EG for MWC burning less than 250 tons per day by November 15, 1992. These NSPS and EG must also be based on MACT.

The Act also directs EPA to establish emission limits for a host of pollutants. These pollutants are: sulfur dioxide, hydrogen chloride, particulate matter, opacity, carbon monoxide, nitrogen oxides, dioxins, mercury, cadmium, and lead.

Finally, the Act directs EPA to promulgate siting requirements for new MWC, which protect public health and the environment, by November 15, 1991. Also, EPA is to develop an operator training's and certification program by November 15, 1992. After November 15, 1994 for MWC burning more than 250 tons per day and after November 15, 1995 for MWC burning less than 250 tons per day, only certified operators may operate MWC.

Current Status

Revising the existing NSPS and EG, developing NSPS and EG for MWC burning less than 250 tons per day, siting requirements for new MWC, and an operator's training and certification program, have been combined into a single project. Analysis is currently under way to support this project.

Future Milestones

The proposal is currently scheduled for publication in January 1992 with promulgation in December 1992.

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SOURCE CATEGORY LIST/SCHEDULE FOR STANDARDS

Background

The Clean Air Act (Act) mandates that the Environmental Protection Agency (EPA) develop a list of all major source categories which emit at least one of the 190 hazardous air pollutants identified in section 112(b) of the Act. This list is to be published by November 15, 1991 and will provide the source categories subject to air toxics emission standards development over the next 10 years. The Act directs the EPA to publish a schedule for promulgating emission standards by November 15, 1992.

Current Status

On June 21, 1991, the preliminary draft Source Category List was published in the Federal Register (FR), and requested comment on several relevant (Act) issues identified in the preamble (i.e., subcategorizing, listing of utility and solid waste incineration categories, and listing of area sources).

Future Milestones

The next milestone is to receive and summarize public comment from the FR notice, and to incorporate EPA response into the Source Category List prior to publication in late January 1992. The EPA is concurrently working on a draft preamble for the Schedule for Standards project. The draft schedule for standards is scheduled for publication in March 1992 and is on schedule to meet the statutory deadline of November 15, 1992.

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MEDICAL WASTE INCINERATORS (MWI'S)

Background

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to develop new source performance standards (NSPS) for new MWI's and emission guidelines for existing MWI's. The NSPS are being developed under section 111(b) of the Act and the emissions guidelines are being developed under section 111(d) of the Act. The NSPS is to reflect the maximum achievable control technology (MACT) while the guidelines may be equal to or less stringent than the NSPS. Section 129 of the Act requires EPA to develop numerical emission limits for the following pollutants: particulate matter, opacity, sulfur dioxide, hydrogen chloride, nitrogen oxides, carbon monoxide, lead, cadmium, mercury, and dioxins and furans. Section 129 also requires that emissions from MWI's and operating parameters be monitored and reported as deemed necessary by the EPA Administrator. In addition, section 129 requires that EPA develop and promote a model State program for the training and certification of MWI operators.

The development of an NSPS and emission guidelines involves extensive engineering, cost and economic investigations, followed by comprehensive EPA and public reviews. The regulatory development program consists of three phases: data gathering, analysis of data and regulatory alternatives, and proposal development.

Proposal of the NSPS and emission guidelines initiates a final cycle of public and EPA review. The proposed NSPS and emission guidelines and their supporting background information are distributed to the affected industries and other interested parties. A public hearing on the proposal is held, if requested. Written and oral comments are then analyzed, and appropriate changes are made to either the NSPS or the emission guidelines. The NSPS and emission guidelines are then promulgated.

Current Status

The data gathering phase has essentially been completed. Six of the 8 MWI's selected for the EPA test program have been tested. Currently, the various control techniques and regulatory alternatives are being analyzed in terms of emissions, performance, costs, economic impacts, and environmental impacts. These analyses are being conducted using the model plant approach. The EPA has developed a range of model plants based on the types and sizes of MWI's used throughout the industry.

MEDICAL WASTE INCINERATORS (MWI'S) (CONTINUED)

Future Milestones

Both the NSPS and the guidelines are scheduled for proposal in July 1992, and promulgation in September 1993.

EPA Contact Persons

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LESSER QUANTITY EMISSION RATES

Background

Section 112(a)(1) defines "major source" as ". . . any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants" This section allows the Administrator discretion to establish a lesser quantity emission rate for defining "major source" on the basis of ". . . potency of the hazardous air pollutant, persistence, potential for bioaccumulation, other characteristics of the air pollutant, or other relevant factors. . . ." This project involves the identification of relevant information and the selection of appropriate pollutants and relevant lesser quantity emission rates.

Current Status

An initial list of pollutants and proposed lesser quantity emission rates were developed and approved by an Environmental Protection Agency (EPA) interoffice work group. The basis of the list, at that time, was equivalent to the methodology used to develop the list of high-risk pollutants considered under the early emissions reduction program [section 112(i)(5)(E)]. The lesser quantity emission rate proposal was placed on hold pending the outcome of Office of Management and Budget's (OMB's) review of the Early Reduction Proposal. Subsequent to OMB review, 6 additional carcinogens were added to the high-risk pollutant list and a relative toxicity weighting factor was assigned to each pollutant. This proposed rule was published in the Federal Register on June 13, 1991. Since that time, EPA has been evaluating the potential impacts of the changes to the high-risk pollutant list on the lesser quantity emission rate package.

Future Milestones

Additional analyses will be conducted, public comments on the high-risk pollutant list and weighting factor approach included in the Early Reduction Proposal will be reviewed, and meetings will be scheduled with the Office of Air and Radiation's senior management to discuss the draft rulemaking package.

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LESSER QUANTITY EMISSION RATES (CONTINUED)

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ATMOSPHERIC DEPOSITION TO GREAT LAKES AND COASTAL WATERS

Background

Section 112(m) of the Clean Air Act (Act) requires a program to assess the extent of atmospheric deposition of hazardous air pollutants (and at the discretion of the Administrator, other air pollutants) to the Great Lakes, Chesapeake Bay, Lake Champlain, and coastal waters. (For this section, coastal waters are those designated by the Environmental Protection Agency as National Estuary Program estuaries, or by the National Oceanic and Atmospheric Administration as National Estuarine Research Reserves.) The section describes some specific requirements, such as deposition monitoring and biota sampling.

One of the main requirements of the section is a report to Congress. The initial report to Congress is to be submitted in November 1993 and is to be updated every 2 years thereafter. This report is to include an assessment of:

- o The contribution of atmospheric deposition to total pollutant loadings
- o The environmental and human health effects of any pollution which is attributable to atmospheric deposition
- o The sources of any pollution which is attributable to atmospheric deposition
- o Whether the pollution contributes to water quality violations
- o A description of any regulatory actions or changes in the Act or other Federal laws which are necessary to assure protection of human health and the environment.

The other main requirement of the section is the promulgation, by November 1995, of such further emission standards or control measures necessary to prevent any adverse effects to human health or the environment.

Current Status

Planning for the needs of the program has been ongoing since the summer of 1990. Two groups have been organized for this purpose, a large Planning Committee, which has review and comment responsibilities, and the Core Project Management Group, which has responsibility to help identify priorities and strategies, as well as to make resource and participation commitments.

ATMOSPHERIC DEPOSITION TO GREAT LAKES AND
COASTAL WATERS (CONTINUED)

A draft plan of the minimum needs for the program has been reviewed by the Planning Committee and is being revised. The new draft will be reviewed and discussed by the core group in August 1991.

Some elements of the program are already ongoing. A requirement for setting up a wet/dry deposition monitoring site for each Great Lake by December 31, 1991, should be met on schedule by accelerating placement of the Integrated Atmospheric Deposition Network (a joint U.S.-Canada network) Master Stations.

Future Milestones

The program should have an approved plan by fall 1991. Work will then accelerate to incorporate the needs of the Great Waters Program into related Agency work. The first report to Congress will be compiled in early 1993 for review.

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MODIFICATION PROVISIONS

Background

Section 112(g) imposes certain preconstruction review requirements on new, modified and reconstructed sources of listed hazardous air pollutants. It takes effect after the approval date of an operating permit program in a State under Title V of the Clean Air Act (Act).

Section 112(g) requires the permitting authority to ensure that new and reconstructed major sources will achieve "new source maximum achievable control technology (MACT)" and that modifications to existing major sources will achieve "existing source MACT" as defined under section 112(d).

The most complex provisions of section 112(g) pertain to modifications. A modification is defined as a physical change leading to an actual emissions above de minimis quantities. In addition, Congress specifically allowed sources to provide offsets elsewhere at the plant to avoid being deemed a modification. Offsetting is allowed where the pollutant being increased is less "hazardous" than the pollutant being decreased. The Environmental Protection Agency (EPA) is required to develop guidance for implementing section 112(g).

Current Status

The EPA has formed an Agency work group to develop the required guidance. The four major topics being discussed by the work group are:

1. Regulatory definitions (e.g., physical change, actual emissions, creditable decreases, contemporaneous, etc.)
2. De minimis levels (e.g., goals for de minimis, health benchmarks, dispersion case for setting emission levels, etc.)
3. Hazard ranking (e.g., defining no-threshold pollutants, ranking carcinogens, ranking for noncancer effects, determining how to deal with data gaps, etc.)
4. Case-by-case determinations of MACT emission limitations.

In late July, EPA held a Public Consultation Workshop with invited participants from industry trade groups, environmental groups, and government agencies. This meeting, similar to other "roundtable" meetings, was intended to gain early feedback on the major issues. At EPA's request, the Science Advisory Board held

MODIFICATION PROVISIONS (CONTINUED)

a meeting on October 28-29 to review methodologies for the hazard ranking required by section 112(g).

Future Milestones

The regulation and guidance package is scheduled for May 1992. The EPA intends to complete the guidance before the effective date of Title V permit programs.

EPA Contact Persons

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AIR RISK INFORMATION SUPPORT CENTER (AIR RISC)

Background

The Air RISC was established in 1988 to assist State/local (S/L) air pollution control agencies and the Environmental Protection Agency (EPA) Regional Offices on technical matters pertaining to health, exposure, and risk assessment for noncriteria air pollutants. It is operated by EPA's Office of Air Quality Planning and Standards (OAQPS), and Office of Health and Environmental Assessment (OHEA). The Air RISC is managed by a Steering Committee that provides guidance and makes decisions on funding and various operational procedures. Joann Held, from the New Jersey Department of Environmental Protection, represents the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials by her participation as an advisory member to the Steering Committee. Robert Sears, from the Santa Barbara County Air Pollution Control District, is the back-up contact for Ms. Held. Their purpose as advisory members is to ensure that Air RISC is meeting the needs of its client community.

Goal and Objectives

The goal of the Air RISC is to support S/L agencies and Regional Offices in the implementation of air toxics control programs by providing technical guidance and information on matters pertaining to health, exposure, and risk assessment of toxic air pollutants. The objectives of the Air RISC are as follows:

1. Provide a mechanism to transfer to S/L agencies available health and risk assessment information through summaries of health effects information, workshops, and seminars
2. Provide telephone access to EPA expertise as an initial quick response to individual problems
3. Provide technical review and/or consultation on site-specific risk assessments
4. Provide guidance to S/L agencies on how to conduct hazard, exposure and risk analyses, as well as how to interpret their results.
5. Provide a mechanism so that S/L agencies can have access to EPA expertise in answering questions pertaining to the scientific basis for conducting risk assessment

AIR RISK INFORMATION SUPPORT CENTER (AIR RISC) (CONTINUED)

6. Obtain feedback from S/L agencies to EPA on technical support needs in the area of health and risk assessment.

Current Status

The Air RISC became fully operational in the last quarter of FY 1988 and since then has witnessed a steady increase in client requests, or about 50 requests per month currently. The Steering Committee, formed to provide direction and make management decisions regarding Air RISC, meets monthly. The committee includes membership from OAQPS and OHEA, with advisory members from the EPA Regional Offices, S/L agencies, the EPA library and EPA's Health Effects Research Laboratory. It is important to note the three kinds of services which Air RISC provides:

1. HOTLINE - for quick referral to experts, and provisions of available EPA health assessment
2. Technical assistance - for more in-depth evaluation and retrieval of information than can be provided via the HOTLINE
3. Technical guidance - for questions general enough in nature to be applicable for many S/L agencies.

Future Milestones

Near and long-term milestones to Air RISC include distributing recently completed public education materials and risk communication manual to all S/L agencies, expanding assistance to include criteria pollutants as well as air toxics, investigating the use of an electronic bulletin board to improve user access, and offering 1-day courses in risk and exposure assessment to requesting S/L agencies.

EPA Contact Persons

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<u>Air RISC HOTLINE:</u>		(919) 541-0888 (FTS) 629-0888
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POLLUTANT PETITION PROCEDURES

Background

Section 112 of the Clean Air Act contains a mandate for the Environmental Protection Agency (EPA) to evaluate and control emissions of hazardous air pollutants. Section 112(b)(1) includes an initial list of 190 hazardous air pollutants. The EPA must periodically review the list of hazardous air pollutants and, where appropriate, revise this list by rule. In addition, any person may petition EPA under section 112(b)(3) to modify the list by adding or deleting one or more substances. While not required by statute, the EPA is developing a procedures and data-requirements rule to assist potential petitioners in filing adequate petitions.

Current Status

The proposed rulemaking is presently undergoing the Office of Management and Budget review.

Future Milestones

The proposed rule is expected to be published in the Federal Register 2 months after the completion of the review.

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NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE (NATICH)

Background

The NATICH data base was established in the mid-1980's as a cooperative effort by the Environmental Protection Agency (EPA) and the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Committee (STAPPA/ALAPCO) to support State/local agencies in their development and implementation of programs targeted at noncriteria (toxic) air pollutants. The Clearinghouse is administered by the Office of Air Quality Planning and Standards.

Objective

The primary purpose of NATICH is to collect, classify, and disseminate information on air toxics generated at the Federal, State, and local levels. Such a mechanism of information exchange reduces the possibility of duplicating existing knowledge. Towards this goal the data base contains information on:

1. Regulatory programs and contacts
2. Permitting data
3. Acceptable ambient concentrations
4. Ambient air monitoring information
5. Source test data
6. Emissions inventory data
7. Research and methods development information.

An agency interested in establishing a toxics program, or expanding an existing one, can access available information on what (if anything) has been implemented by other air pollution authorities.

Information is collected on an annual basis by submittal from all participating agencies. Agencies submit data regarding the types of information listed above. In addition to on-line searches, NATICH publishes a number of reports on an annual basis. Information may be submitted in three ways: direct on-line entry, submittal of hard copy forms, and electronic transfer.

The distribution of information occurs in several ways. The NATICH allows users direct on-line access to data base information at a cost of \$15 to \$20 per hour of use. Information

NATIONAL AIR TOXICS INFORMATION
CLEARINGHOUSE (NATICH) (CONTINUED)

can either be interactively viewed on screen or batch reports may be printed at remote locations.

Current Status

Since its introduction NATICH has undergone periodic modifications in an attempt to expand and meet the needs of the user community. In the fall of 1989, a link was established between NATICH and the Toxic Release Inventory System (TRIS). The TRIS is a data base of information collected as a result of section 313 (Emergency Planning and Community Right-to-Know Act) of the Superfund Amendments and Reauthorization Act. The TRIS contains inventory information on approximately 300 toxic air pollutants from facilities nationwide.

Future Milestones

Currently there is work in progress on linking NATICH to the Aerometric Information Retrieval System (AIRS). The AIRS is a data base with several subsystems that contain data on criteria pollutants. In addition, a two-way message board is also being instituted to facilitate communication between NATICH staff and users.

EPA Contact Persons

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ACID RAIN IMPLEMENTATION OVERVIEW

Background

On November 15, 1990 Congress passed the Clean Air Act (Act). Title IV of the Act establishes a program to curtail acidic deposition by reducing emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) from primarily power plants by 10 million tons and approximately 2 million tons, respectively, from 1980 levels.

To achieve these reductions, the Act imposes, in two phases, technology-based emission limits for NO_x and allocates SO₂ allowances to affected utility units. In Phase I, the Act lists allowances for 110 plants (261 listed units) based on 2.5 lbs/MMBtu and 1985 to 1987 MMBtu/year heat input (baseline) of the unit. Units must comply by January 1, 1995. In Phase II, all existing utility units greater than 25 MW and all new units are covered. These units generally must meet their baseline times 1.2 lbs/MMBtu by January 1, 2000.

So that required emission reductions may be achieved in the most cost-effective manner possible, the Act relies on a market-based concept permitting the trading of SO₂ allowances among affected units. Progress and compliance will be measured through the operation of continuous emission monitoring systems or acceptable alternative methods. A \$2,000 excess emissions fee will be charged for every ton of SO₂ or NO_x emissions a unit emits over its allowance, and a unit will be required to offset its excess SO₂ emissions in the following year, in order to preserve the integrity of the allowance system.

As authorized by the Act, the Acid Rain Program requirements will be codified in six regulations.

1. Permits
2. Allowance system
3. Opt-in
4. Continuous emissions monitoring (CEM)
5. Nitrogen oxides (NO_x) control
6. Excess emissions

Current Status

One portion of the allowance system regulation, containing the allowance auction and sale requirements, was proposed in the

ACID RAIN IMPLEMENTATION OVERVIEW (CONTINUED)

Federal Register (FR) on May 23, 1991 (56 FR 23744-23759), in order to meet the 12-month statutory deadline.

The Environmental Protection Agency (EPA) has developed a core acid rain program rulemaking package, containing four rules: the permits rule, (the remaining bulk of) the allowance system rule, the CEM rule, and the excess emissions rule. This core acid rain rulemaking package was proposed on December 3, 1991.

In addition, the Act set 18-month deadlines for the NO_x control rule and the opt-in rule. Although EPA delayed beginning work on these regulations due to resource constraints, EPA currently plans to accelerate the NO_x rule development schedule in order to publish the final rule as close to May 15, 1992 (the 18-month deadline) as possible. However, the opt-in rule will be developed approximately 6 months behind schedule, with publication of the final rule by December 1992.

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ACID RAIN IMPLEMENTATION -
CONTINUOUS EMISSIONS MONITORING (CEM)

Background

Title IV of the Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to promulgate CEM regulations within 18 months of enactment. Within 3 years of enactment, each Phase I affected unit must install and operate CEM's or an acceptable alternative method, quality assure the data for sulfur dioxide (SO₂), volumetric flow, nitrogen oxides (NO_x), opacity, a diluent gas, and carbon dioxide (CO₂), and keep records and reports pursuant to the promulgated regulations. By January 1, 1995, each source subject to this Act must install and operate CEM (or an acceptable alternative). Unavailable CEM data would be treated as if the unit were uncontrolled, unless the unit can provide satisfactory alternative emissions data. Information reported from these systems will be used for tracking compliance with source-specific emissions allowances, for monitoring the trading of emissions allowances, and for calculating excess emission fees mandated by the Act.

The proposed CEM rule establishes the requirements for the continuous monitoring of SO₂, volumetric flow, NO_x, opacity, a diluent gas, and CO₂ from affected units under Phase I and Phase II of the acid rain program. In addition to the monitoring requirements for each pollutant, the proposed rule contains provisions for the equipment certification procedures, equipment performance verification tests, and recordkeeping and reporting requirements.

Current Status

The CEM rule was proposed in the Federal Register on December 3, 1991 as part of the core acid rain program rulemaking package. We expect to meet the 18-month statutory deadline by publishing the final rule by May 1992.

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ACID RAIN IMPLEMENTATION - PERMITS

Background

Operating permit programs are mandated by two titles of the Clean Air Act. Under Title V, Permits, the Environmental Protection Agency (EPA) will promulgate regulations within 12 months after enactment, setting forth requirements for State operating permit programs. These programs are intended to provide an expedited procedure for managing stationary source emission limits and, as such, supplant a major portion of the existing State implementation plans with respect to these emission limitations and related monitoring and compliance provisions. States are required to submit permit programs to EPA for approval within 3 years after enactment.

Under Title IV, Acid Deposition Control, EPA is required to promulgate regulations within 18 months after enactment, governing Federal permits to be issued in Phase I (and in Phase II for States without an approved permit program). Individual source owners are required to submit Phase I permit applications and compliance plans to EPA under this program within 30 months after enactment. These permits will establish the basis for implementation of Phase I, including the trading of allowances among sources affected in Phase I.

By January 1, 1994, each Phase II affected source must submit a permit application and compliance plan to the appropriate permitting authority. By July 1, 1995, each State with an approved permit program shall issue Phase II permits. By July 1, 1996, EPA shall issue permits to Phase II sources not issued a State permit.

The proposed permit rule contains the relevant requirements for owners and operators obtaining permits. The major permit provisions contain the requirements for (1) designated representative, (2) permit applications and proposed compliance plans, (3) submissions deadlines, and (4) permit revisions and permit challenge procedures.

Current Status

The Title IV permits rule was proposed in the Federal Register on December 3, 1991 as part of the core acid rain program rulemaking package. The statutory deadline for publishing the final rule is May 1992.

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ACID RAIN IMPLEMENTATION - ALLOWANCE SYSTEM

Background

The Clean Air Act Amendments (CAAA), sections 403, 405, and 406, establish the allowance system as a market-based approach to cost-effectively reduce sulfur dioxide (SO₂) emissions. One allowance is an authorization to emit 1 ton of SO₂, during or after a specified calendar year. Affected sources, through their designated representative, are required to certify that their total emissions do not exceed the number of "current" or useable allowances they hold at the end of a given calendar year. After an initial allocation of allowances to each affected source according to its formulations as specified in the CAAA, utilities may choose to buy, sell, or hold allowances as part of a self-devised compliance strategy.

The allowances rule, which will contain six major subparts, is being promulgated in separate stages; Subpart E contains the auction and sale requirements and has already been proposed in order to meet the 12-month statutory deadline. Subpart A will contain general information, such as applicability and definitions. Subpart B will contain the allowance allocations, and will be proposed before the statutory deadline of December 31, 1991. The central components of the allowance system, including the tracking system (Subpart C), transfer requirements (Subpart D), and allowances for conservation and renewable energy (Subpart F), are contained in the core acid rain program rulemaking package.

The tracking system, Subpart C, must be reliable and efficient for a robust market of allowance trading. The tracking subpart contains the requirements for allowance accounts and subaccounts, allowance serialization, end-of-year allowance compliance, dispute resolution procedures for account errors, and public notice of account information.

Transfer requirements, Subpart D, must also be reliable and efficient for a robust market of allowance trading. The transfer subpart contains the recordation and notification provisions for effecting the transfer of allowances.

Allowances for conservation and renewable energy, Subpart F, are designed to encourage cost-effective pollution prevention as a means of complying with the SO₂ and nitrogen oxide emissions reductions mandated by the CAAA. The proposed Subpart E contains the application and verification procedures affected units must follow to receive allowances from the Conservation and Renewable Energy Reserve.

ACID RAIN IMPLEMENTATION - ALLOWANCE
SYSTEM (CONTINUED)

Thus, the proposed allowance rule sets forth the procedures for establishing accounts, the procedures for the Environmental Protection Agency (EPA) and account holders in operating the account system, and the procedures for receiving allowances from the Conservation and Renewable Energy Reserve.

Current Status

The bulk of the allowance system rule was proposed in the Federal Register (FR) on December 3, 1991, as part of the core acid rain program rulemaking package. The EPA expects to meet the 18-month statutory deadline by publishing the final rule by May 1992.

The auction and sale subpart of the allowance system rule was proposed in the FR on May 23, 1991 (56 FR 23744-23759). The allowance allocation subpart of the allowance system rule is scheduled for proposal in the FR by April 31, 1992.

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ACID RAIN IMPLEMENTATION - EXCESS EMISSIONS

Background

The Clean Air Act Amendments, section 411, sets forth the consequences for an affected source failing to meet its emissions limitations requirements. Specifically, the excess emissions rule contains emissions offset planning requirements and excess emissions penalties.

If an affected source exceeds its sulfur dioxide (SO₂) or nitrogen oxides (NO_x) emissions limitation for a given calendar year, then the affected source must compensate by reducing its emissions by the exceeded amount for the following year. The applicable requirements for such cases are contained in the emissions offset planning provisions. For affected sources that exceed their SO₂ emissions limitation, the offset planning provisions require that the affected source return the appropriate number of allowances to the Environmental Protection Agency (EPA), in addition to providing the emissions offset plan required for exceeding either SO₂ or NO_x emissions limitations.

The proposed rule also contains the excess emissions penalty requirements. As specified in the statute, an affected source must pay the EPA \$2,000 per ton of excess emissions, as adjusted annually using the consumer price index to account for inflation. The excess emissions penalty provisions also contain the requirements specifying payment procedures.

These requirements are designed to act as a strong incentive for compliance with the mandated emissions reductions of the acid rain program.

Current Status

The excess emissions rule was proposed in the Federal Register on December 3, 1991 as part of the core acid rain program rulemaking package. The statutory deadline for publishing the final rule is May 1992.

EPA Contact Person

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ACID RAIN IMPLEMENTATION -
NITROGEN OXIDES (NO_x) CONTROL

Background

The acid rain program addresses the annual average NO_x emissions rate requirements as a separate component of the program. Specifically, certain coal-fired electric utility boilers are required to reduce their emissions of NO_x through installation of low NO_x burners or their equivalent. The NO_x control rule, which will be the subject of future rulemakings, will be codified in Title 40, Code of Federal Regulations, Part 76.

These NO_x provisions of the Clean Air Act apply to tangentially and dry bottom wall-fired boilers in coal-fired utility units. The proposed rule will establish annual allowable NO_x emission limitations. In addition, the proposed rule will cover the use of less stringent alternative emissions limitations, extensions of the January 1, 1995 deadline for complying with the emissions limitations, and compliance through averaging emissions among units.

Current Status

The Environmental Protection Agency (EPA) began to develop the NO_x rule, with the help of the Acid Rain Advisory Committee, in meetings held on July 30 through August 1, and August 27 through August 29, 1991. The NO_x rule will be developed on an accelerated schedule, with publication of the final rule as close to May 1992 (the 18-month statutory deadline) as possible.

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ACID RAIN IMPLEMENTATION - OPT-IN RULE

Background

Because the acid rain program is designed to allow sources to meet the mandated emissions reductions in the most cost-effective manner possible, sulfur dioxides (SO₂) sources not explicitly affected by the Clean Air Act requirements (e.g., industrial sources) may elect to participate in the allowance market by "opting-in" to the acid rain program. Opt-in sources will then be subject to the core components of the acid rain program, including permits and continuous emissions monitoring requirements in addition to the allowance trading program. Therefore, the opt-in rule, which will be the subject of a future rulemaking will be based on the core acid rain program rulemaking package.

Units that emit SO₂ but are not affected by Phase I or Phase II requirements of Title IV, and are, therefore, eligible to opt-in to the acid rain program, include: existing small utility units (25 MW or less), industrial boilers, some independent power producers, simple combustion turbines, and process sources (those sources which generate SO₂ emissions from anything other than a fossil fuel-fired combustion device).

The Environmental Protection Agency (EPA) must set emission baselines and emission limitations for each opt-in applicant based on operating data from 1985 to 1987, or if appropriate, from alternative representative data. Allowances for opt-in sources will be allocated only at the level that represents full compliance with the emissions limitation requirements. Finally, opt-in sources will be required to follow permitting requirements as well as the continuous emissions monitoring requirements. The proposed opt-in rule will address these issues.

Current Status

The EPA is developing the opt-in rule with the help of the Acid Rain Advisory Committee. The opt-in rule will be developed approximately 6 months behind schedule, with publication of the final rule by December 1992.

EPA Contact Person

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U.S.-CANADA BILATERAL AIR QUALITY AGREEMENT

Background and Current Status

The United States and Canada signed a bilateral air quality agreement on March 13, 1991, when President George Bush traveled to Ottawa to meet with Prime Minister Brian Mulroney. The purpose of the agreement is to provide the two countries with a practical and flexible formal mechanism to work on shared air pollution problems. During the negotiations on the agreement, the two countries agreed on a framework agreement that allows work on a variety of air pollution problems, not just acid rain.

The agreement is composed of three parts: a main body and two annexes--one on sulfur dioxide (SO₂) and nitrogen oxides (NO_x), and one on scientific and technical activities and economic research.

The main body of the agreement contains articles on a variety of issues, including:

- o General and specific objectives
- o Assessment, notification, consultation, and mitigation regarding sources of air pollution in each country that might impact the other country in a significant manner
- o The establishment of a bilateral Air Quality Committee to assist in the implementation of the agreement
- o Dispute resolution.

Annex I covers specific objectives concerning SO₂ and NO_x, two major acid rain precursors. The annex contains specific targets and timetables for reductions in the two pollutants from both stationary and mobile sources from both countries. The U.S. commitments mirror those found in the Clean Air Act (Act), specifically, the implementation of an acid rain program aimed at achieving a 10 million ton reduction of SO₂ emissions and a 2 million ton reduction in NO_x emissions from 1980 levels.

The Canadian commitments incorporate elements of Canada's acid rain control program, established in 1985, and commitments to strengthen that program and adopt new programs to limit emissions of NO_x from both stationary and mobile sources. Canada has agreed to:

- o Establish a permanent national cap on SO₂ in the year 2000.
- o Utilize emission estimation techniques that are comparably effective to the use of continuous emission

U.S.-CANADA BILATERAL AIR QUALITY AGREEMENT
(CONTINUED)

monitors (CEM's) (and to investigate the feasibility of deploying CEM's on electric utility units).

- o With respect to sources that could cause significant transboundary air pollution, develop programs that would afford protection of the environment in terms of the prevention of significant deterioration and visibility impairment comparable to the protection afforded by the provisions in the Act.

The two countries recognize that their air pollution control programs do not have to be identical, but they also recognize the value of having programs in these areas that are comparably effective.

Annex II covers scientific and technical activities and economic research. In this annex, the two countries have agreed to coordinate their air pollution monitoring networks, to use compatible formats and methods, and to share information regarding a variety of air emissions and pollution data. The countries have also agreed to cooperate and exchange information with respect to effects monitoring, research on human health and ecological effects of air pollutants, atmospheric modeling, control technologies, and their analysis of market-based mechanisms, such as emissors trading.

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FEDERAL AND STATE OPERATING PERMIT REGULATIONS

Background

Title V of the Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to promulgate regulations, setting forth requirements for State operating permit programs. Under Title V, States are responsible for submitting, by November 15, 1993, operating permit programs to EPA for approval. Operating permit provisions would apply to all major sources (generally over 100 tpy emissions, but smaller in more serious nonattainment areas), sources subject to new source performance standards or national emission standard for hazardous air pollutants, sources for which prevention of significant deterioration or new source review permits are required, sources over 10 tpy of a single pollutant listed in section 112(b) (or 25 tpy of a combination of those pollutants), and such other sources as may be added by rule.

The permits, which will be considered federally-enforceable and subject to EPA approval, will address all applicable requirements of the Act; will be renewable at 5-year or less intervals; will contain compliance plans, reporting requirements, and other procedures to ensure their effective implementation; and will go through public participation procedures. Of critical importance, is a permit fee requirement to fund the permitting program. The presumptive amount of these annual fees is \$25/ton (1989 basis) per pollutant (excluding carbon monoxide), up to a maximum of 4,000 tons per pollutant for each source. States not submitting approvable programs or not implementing an approved program could be subject to certain sanctions in their nonattainment areas, including EPA promulgation of a program.

Current Status

The regulations implementing Title V were proposed in the Federal Register (FR) on May 10, 1991 (56 FR 21712). The public comment period for the proposal ended July 9, 1991. The Office of Air Quality Planning and Standards gained considerable insight into program design from numerous representatives of State and local permitting agencies. Around 40 State or local agencies also provided public comments on the proposal. The EPA is currently analyzing the public comments which are of critical importance in formulating the final regulatory requirements.

Future Milestones

We expect to publish the final guidance rules for State permit programs in early 1992. Efforts are currently under way to develop Federal operating permit regulations to be implemented in the event a State fails to submit an approvable permit program or fails to implement an approved program. Attention is also

FEDERAL AND STATE OPERATING PERMIT REGULATIONS (CONTINUED)

beginning to be focused on training and guidance development as the Agency looks ahead to assisting State and local agencies in program development and in implementation strategies.

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MODEL OPERATING PERMITS FOR SOURCES OF PM-10 EMISSIONS

Background

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to provide guidance to State and local agencies for control of particulate matter nominally 10 microns or less (PM-10) emissions from both point and area sources.

As part of this guidance, the EPA has decided to develop model operating permits for sources of PM-10 emissions. These model permits will be applicable for both stack sources and fugitive sources. These documents will be used to support implementation of Title V of the Act which requires States to adopt operating permit programs to be administered by State or local air pollution control agencies.

The purpose of this project is to develop model operating permit documents for the following industries and their associated sources of PM-10 emissions.

- Hot mix asphalt plants
- Elemental phosphorous plants
- Glass manufacturing
- Gypsum processing and products
- Grain milling
- Lime kilns
- Marine grain elevators
- Nonferrous smelters
- Nonmetallic minerals processing
- Petroleum refineries
- Portland cement plants
- Pulp mills
- Primary aluminum plants
- Paint manufacturing
- Raw materials handling
- Steel mills
- Utility boilers

In addition, model operating permit documents will be developed for the following sources of lead PM-10 emissions.

- Secondary lead smelting and refining plants
- Lead acid battery manufacture
- Secondary lead remelting and consuming plants

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MODEL OPERATING PERMITS FOR SOURCES OF PM-10 EMISSIONS
(CONTINUED)

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AIRS FACILITY SUBSYSTEM (AFS) PERMITTING ENHANCEMENTS

Background

Title V of the Clean Air Act (Act) requires that operating permits be issued to stationary sources of air pollution regulated under the various titles of the Act.

In order to achieve this requirement, Title V also requires and sets out a schedule for development and approval of State Operating Permit Programs. Once State/local agencies have received approval of their operating permit programs by the Environmental Protection Agency (EPA), they will be required to issue operating permits and track each permittee's compliance with all of the requirements set out in the permit.

In order to respond to the information needs which arise from the implementation of Title V at all levels of government, the EPA is developing data system capability. This capability will be a part of the Aerometric Information Retrieval System (AIRS), and will be enhancing the existing capabilities of the AFS.

Current Status

The AFS is currently operational on EPA's mainframe computer center with telecommunications access capabilities for State/local agencies. Permitting enhancements are currently in the planning stage; the User Requirements Analysis will be available by the end of January 1992. Design will commence at that time. To support the early permitting needs of agencies, an initial system will be developed on a fast-track. It is likely that this will be a PC-based version.

Future Milestones

The User Requirements Analysis will serve as the plan upon which we build permitting capability in AIRS.

Many agencies are improving their permitting systems to meet the requirements contained in Title V of the Act. For these cases, there is a need to know the data and format of the data which EPA will require for national reporting. The guidance document will help meet this need.

The AIRS already provides a structure for storing facility information. Any required permitting information pertaining to the structure of a facility will conform to or build on the existing plant structure as contained in the AFS. Therefore, parts of the AFS data dictionary will be included in the guidance document.

AIRS FACILITY SUBSYSTEM (AFS) PERMITTING
ENHANCEMENTS (CONTINUED)

Additionally, AFS batch transaction formats and EPA locational data policy will be included in the first guidance document. We will continue to add to and improve this document as we proceed.

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Background

Current Status

Future Milestones

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BAN OF NONESSENTIAL USES

Background

On August 12, 1988, the Environmental Protection Agency (EPA) promulgated, in the Federal Register (FR) (53 FR 30566), regulations implementing the original phaseout requirements of chemicals controlled by the Montreal protocol on substances that deplete the ozone layer. In response to subsequent amendments to the protocol and Title VI of the Clean Air Act (Act), the EPA is required to promulgate additional regulations accelerating the phaseout of Class I (chlorofluorocarbons, halons, methyl chloroform and carbon tetrachloride) and Class II (hydrochlorofluorocarbons) ozone-depleting substances and limiting their end uses. Among the end-use restrictions required by Title VI is a ban of nonessential uses of ozone-depleting substances (section 610). The EPA is required by section 610 to prohibit the sale or distribution of noise horns, party streamers, noncommercial solvent and photographic cleaners as well as any product releasing class I ozone-depleting substances that meets the statutory criteria for determining nonessentiality.

Current Status

The rulemaking package, proposing to ban nonessential uses of ozone-depleting substances, is expected to be published in the FR in January 1992. The ban will be effective 1 year later.

Future Milestones

Effective January 1, 1994, section 610 prohibits the sale or distribution of aerosols and foams releasing Class II ozone-depleting substances. The EPA is authorized to make limited exemptions to this prohibition. The EPA plans to promulgate regulations implementing the ban on class II products and additional prohibitions on Class I products (if any) before the 1994 effective date.

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LABELING

Background

On August 12, 1988, the Environmental Protection Agency (EPA) promulgated, in the Federal Register (53 FR 30566), regulations implementing the original phaseout requirements of chemicals controlled by the Montreal protocol on substances that deplete the ozone layer. In response to subsequent amendments to the protocol and Title VI of the Clean Air Act, the EPA is required to promulgate additional regulations accelerating the phaseout of Class I and Class II ozone-depleting substances and limiting their end uses. Among the end-use restrictions required by Title VI is labeling of containers and products containing or manufactured with ozone-depleting substances (section 611). Section 611 requires all such containers and products to bear a specific warning label.

Current Status

The EPA has developed the proposed regulation to implement the labeling requirement of section 611. The rulemaking package is currently undergoing the Office of Management and Budget review.

Future Milestones

In addition to labeling requirements for Class I chemicals, section 611 requires labels on products made with, or containing, Class II chemicals after May 15, 1992.

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SERVICING OF MOTOR VEHICLE AIR CONDITIONERS

Background

Section 609 of the Clean Air Act (Act) establishes an important new statutory structure to control the release of refrigerant from motor vehicle air conditioners into the atmosphere. After January 1, 1992, any person repairing or servicing motor vehicle air conditioners for consideration must properly use approved refrigerant recycling equipment. All persons performing service must be properly trained and certified. The January 1, 1992 effective date is delayed for 1 year for small volume shops--entities that serviced less than 100 motor vehicle air conditioners during 1990. The EPA will establish standards for refrigerant recycling equipment, for proper use of such equipment, and for the certification of technicians. The Act requires the standards be at least as stringent as certain voluntary standards developed by industry in a voluntary program over the last 2 years.

Section 609 also prohibits the sale or distribution in interstate commerce of any Class I or Class II substance suitable for use in a motor vehicle air-conditioning system in containers under 20 pounds. The only exception is for sales or distribution to certified technicians.

Current Status

The proposed rule for servicing of motor vehicle air conditioners was officially submitted for the Office of Management and Budget review under Executive Order 12291 and the Paperwork Reduction Act on June 19, 1991.

Future Milestones

The regulations are effective January 1, 1992. The Agency will develop standards for recovery-only machines this fall. Section 609 requires EPA to develop regulations to recover/recycle any refrigerant from mobile air conditioners within 5 years.

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CHLOROFLUOROCARBONS (CFC'S) PHASEOUT

Background

In August 1988, the Environmental Protection Agency (EPA) issued its final rule implementing the Montreal protocol on substances that deplete the ozone layer. The purpose of the Montreal protocol is to limit the production and consumption of chemicals known to contribute to the depletion of the stratospheric ozone layer. The EPA controls the production and consumption of these chemicals by issuing to companies allowances or permits that are expended in the production and importation of these chemicals.

The 1988 rule required firms to reduce their production of CFC's by 50 percent of their 1986 levels by 1998 and froze the production of halons at 1986 levels beginning in 1992. In addition to these production limits, the rule requires a similar reduction in CFC and halon consumption, defined as production-plus imports minus exports.

The parties to the Montreal protocol met in June 1990 to revise the protocol requirements based on additional evidence that indicated that significant depletion of ozone has occurred over the last 20 years. The parties agreed to add methyl chloroform and carbon tetrachloride to the list of ozone-depleting substances and to require the phaseout of all ozone-depleting substances by the year 2000 (2005 for methyl chloroform).

In the Clean Air Act (Act), Congress included stringent requirements for controlling ozone-depleting substances. For the substances covered by the revised protocol's measures, Title VI of the Act calls for deeper interim reductions and an earlier phaseout date (2002 instead of 2005) for methyl chloroform. It also contains requirements for trades between chemicals, companies, and parties. Production is controlled on a calendar year basis.

Current Status

On March 6, 1991, EPA published in the Federal Register (FR) (56 FR 9518) temporary regulations to implement the 1991 limits on the production and consumption of ozone-depleting chemicals required by section 604 of the Act.

The EPA has completed a draft proposal for regulations implementing sections 603, 604, 607, and 616 of the Act for 1992 and later. The proposal is expected by February 1992.

The rule will implement the phaseout schedule set forth by section 604. In 1992, production and consumption of CFC's and

CHLOROFLUOROCARBONS (CFC'S) PHASEOUT (CONTINUED)

halons would be limited to 80 percent of the baseline level, methyl chloroform would be frozen at the baseline level of 67 percent, and carbon tetrachloride would be reduced to 90 percent of its baseline. The limits on the production and consumption of ozone-depleting chemicals are gradually tightened until 2000 (2002 for methyl chloroform), when the chemicals are to be phased-out. An additional cap on production and consumption to ensure compliance with the protocol's somewhat different requirements is also proposed.

Section 607 requires that any trade between chemicals or companies results in less overall production or consumption than would have occurred absent the trade.

Section 604 permits production in excess of the amount otherwise allowed in order to supply the basic domestic needs of developing countries that are operating under article 5 of the protocol. Section 616 authorizes EPA to issue regulations providing for trades of allowable production with other protocol parties.

Future Milestones

January 1, 1992 - Effective date of final regulations

June 1992 - Meeting of the parties to the Montreal protocol
scheduled to discuss if additional action is needed

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NATIONAL RECYCLING AND EMISSIONS REDUCTION PROGRAM

Background

Section 608 of the Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to develop regulations that limit emissions of ozone-depleting compounds during their use and disposal to the lowest achievable emissions level (LAEL) and that maximize recycling. Regulations for refrigerants used or disposed of during servicing, repair, or disposal of air conditioning and refrigeration equipment were due on January 1, 1992 and become effective July 1, 1992. Also effective on July 1, 1992 is a prohibition on venting of refrigerants during servicing and disposal. The LAEL regulations for ozone-depleting compounds in other uses are due by November 1994.

The EPA's first set of regulations under section 608 will focus on recycling refrigerants at servicing and disposal. The Agency is currently developing the proposal that may include technician and equipment certification programs as well as recordkeeping requirements. In addition, EPA may set up a fee-deposit program to provide an additional economic incentive to recycle.

A second set of regulations under section 608 will focus on reducing refrigerant emissions during other parts of the life-cycle of air conditioning and refrigeration equipment in those sectors where such emissions are significant. Controls might include leak resistant equipment and leak detection and repair.

The third set of regulations under section 608 may include sector-by-sector phaseout of ozone-depleting chemicals; the Act defines LAEL to include the use of substitutes.

Current Status

The EPA is currently developing regulations to require recycling of refrigerants at servicing and disposal.

Future Milestones

The EPA plans to propose its recycling requirements in the fall. Section 608 required that EPA publish the final rule by January 1, 1992, and the rule becomes effective on July 1, 1992.

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SAFE ALTERNATIVES PROGRAM (SAF)

Background

On August 12, 1988, the Environmental Protection Agency (EPA) promulgated in the Federal Register (53 FR 30566), regulations implementing the original phaseout requirements of chemicals controlled by the Montreal protocol on substances that deplete the ozone layer. In response to subsequent amendments to the protocol and Title VI of the Clean Air Act (Act), EPA is required to promulgate additional regulations accelerating the phaseout of Class I (chlorofluorocarbons, methyl chloroform, halons, and carbon tetrachloride), and Class II (hydrochlorofluorocarbons) ozone-depleting substances and limiting their end uses. Title VI (section 612) also requires EPA to establish a SAF, which will evaluate substitutes that will be introduced as alternatives to the ozone-depleting chemicals being phased out.

Section 612, which will be referred to as the Significant New Alternatives Policy (SNAP) program, requires the Agency to ban the use of substitutes (defined as chemicals, substitute products, or alternative manufacturing processes) that pose adverse effects to human health and the environment if other more acceptable alternatives are available. The SNAP program will evaluate both existing and new alternatives which are currently or potentially available.

Current Status

The EPA has prepared an advanced notice of proposed rulemaking for the SNAP program.

Future Milestones

Promulgation of the rulemaking for the SNAP program is required by November 15, 1992.

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MONETARY AWARDS RULE

Background

In the Clean Air Act (Act), Congress granted new authority to the Environmental Protection Agency (EPA) to pay an award, not to exceed \$10,000, to any person who furnishes information or services which lead to a criminal conviction or a civil penalty for any violation under the Act. Section 113(f) also authorizes the Administrator to prescribe, by regulation, additional criteria for eligibility for such an award. A regulation will address eligibility, confidentiality, criteria for payment of an award, and nominations for awards. Work group closure occurred on December 18, 1991.

Future Milestones

Publication of the proposal in the Federal Register is expected in May 1992. Final promulgation is expected in March 1993.

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ADMINISTRATIVE PENALTIES RULES OF PRACTICE

Background

The Clean Air Act (Act) provides the Administrator the authority to administratively assess penalties for a wide variety of violations of the Act. As required by Titles II and VII of the Act, the Environmental Protection Agency (EPA) must provide opportunity for a hearing, in accordance with the Administrative Procedure Act (APA), prior to issuing an administrative penalty order. The EPA is proposing that the Consolidated Rules of Practice (CROP), at 40 Code of Federal Regulations (CFR), Part 22, be used as the procedural framework for administrative penalty assessment under the Act. The EPA's CROP govern the assessment of administrative penalties under other statutes administered by EPA that are subject to the requirements of the APA. Use of the CROP allows EPA to implement the administrative penalty authority with uniform hearing procedures that satisfy the procedural requirements established by the Act.

In order to promulgate these procedures and institute administrative enforcement actions, the Title VII work group has drafted regulations that insert Act Title II and Title VII administrative hearings into the existing CROP. Specifically, the draft regulations revise the authority and scope provisions of the CROP to include administrative penalty hearings brought under Act sections 205(c), 211(d) (for Title II), and 113(d)(1) (for Title VII). The regulations also establish new supplemental CROP rules (at 40 CFR, section 22.42) for Title VII hearings in order to satisfy statutory notice requirements, provide the presiding officer with subpoena power, and govern the payment of witness fees. Similarly, the regulations amend Title II's existing supplemental CROP rules (40 CFR, section 22.34) to achieve these same ends.

Current Status

The Notice of Proposed Rulemaking was published in the Federal Register on July 22, 1991. The final regulation has been drafted and is being forwarded to all of the Assistant Administrators for comment.

Future Milestones

Promulgation of the Administrative Penalties Rules of Practice is scheduled to occur in February 1992.

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FIELD CITATION REGULATIONS

Background

The Clean Air Act allows the Environmental Protection Agency (EPA) to implement a field citation program for minor violations. Penalties for these violations are not to exceed \$5,000 per day of violation. Citations are to be issued by EPA officers or employees. Recipients of citations can request hearings to discuss the citations.

Current Status

The work group is discussing violation categories, penalties, application of penalty assessment criteria, delegation of authority, citation issuance, training, hearing procedures, and prehearing procedures.

Future Milestones

The regulation is scheduled for proposal in June 1992 and for promulgation in April 1993.

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RULES FOR CITIZENS' SUITS

Background

The Clean Air Act (Act) made significant changes to the Citizen Suit provisions of the Act. A new regulation will replace the existing Act citizen notice regulation promulgated in 1971, and it will incorporate changes in the citizen notice practice made by the Act. To facilitate issuance of notices, the new regulation will conform more closely to the recent notice provisions of other environmental statutes. The work group is also discussing the potential uses of the new penalty fund; and how the EPA should comment on proposed consent decrees and statutorily-permitted mitigation projects.

Current Status

Work group closure occurred on January 8, 1992. The proposed rule will be submitted to the Office of Management and Budget shortly.

Future Milestones

The regulation is expected to be proposed in the Federal Register in May 1992. Final promulgation is expected in March 1993.

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CONTRACTOR LISTING
REGULATION AMENDMENTS WORK GROUP
40 CFR PART 51

Background

The Clean Air Act, section 306, prohibits any Federal agency from entering into any contract with any person who is convicted of any offense under section 113(c). The prohibition shall continue until the Administrator determines that the violation giving rise to the conviction has been corrected. The Administrator has discretionary authority to extend this prohibition to other facilities owned or operated by the convicted person.

Current Status

Draft regulations have been developed and circulated to the work group to be revised as appropriate.

Future Milestones

Publication of the proposed rule is scheduled for May 1992. Promulgation is scheduled for March 1993.

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COMPLIANCE CERTIFICATION RULEMAKING

Background

The Clean Air Act (Act) requires the Environmental Protection Agency (EPA) to develop regulations that provide guidance to major stationary sources of air pollution for installing enhanced monitoring systems and for periodically certifying their compliance with air quality standards. These requirements will be published in 40 Code of Federal Regulations, Part 64, and will be implemented by the States through their Title V operating permit programs. The Part 64 rule will require major sources to monitor their emissions as continuously as possible for the purpose of using that information as the basis of their compliance certification. If it is not possible for a source to directly monitor their emissions, a substitute such as surrogate or parameter monitoring is allowable as long as the permit includes enforceable certifications conditions.

Current Status

The rulemaking work group has conducted several work group meetings since its establishment on February 6, 1991. Data on monitoring and certification conditions used in State permit programs have been gathered and a more comprehensive survey of four States has been initiated.

Future Milestones

The Part 64 proposal package is scheduled to be published in the Federal Register in February 1992 and promulgated in November 1992. The draft proposal package will be distributed to work group members in September 1992. To support the development of the draft rule, these products will be completed by the end of August 1991: (1) State survey final report, (2) draft Regulatory Impact Analysis and Regulatory Flexibility Analysis, and (3) draft Information Collection Requirements.

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IMPACT STUDY ON VISIBILITY

Background

The Clean Air Act (Act) requires that by November 15, 1992, the Administrator shall conduct an assessment of the progress and improvements in visibility in Class I areas that are likely to result from the implementation of the provisions of the Act other than provisions designed specifically to protect visibility in Class I areas (sections 169A and 169B). In addition, the Act requires that for every 5 years, thereafter, the Administrator shall conduct an assessment of actual progress and improvement in visibility in Class I areas. The Administrator must prepare a written report on each assessment and transmit copies of these reports to the appropriate committees of Congress.

Current Status

The work plan for the study has been completed.

Future Milestones

The first draft of the report is expected in April 1992. The report will utilize current assessments of visibility changes, such as the National Acidic Deposition Assessment Program reports. In addition, available emission change assessments for other pollutants, which contribute to visibility impairment, will be used to generate visibility changes expected from control of nonsulfur pollutants.

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TRANSPORT COMMISSIONS AND NAVAJO RULEMAKING

Background

Transport Commissions

Section 169B of the Clean Air Act (Act) provides for the establishment of visibility transport commissions when the Administrator of the Environmental Protection Agency (EPA) determines that they are appropriate or when two or more Governors of the affected States petition the Administrator for the establishment of a commission. The purpose of the commissions is to evaluate the transport of pollutant into protected national parks and wildernesses and to recommend corrective action to the Administrator. Section 169B(f) requires the establishment of a Grand Canyon Visibility Transport Commission.

Navajo Generating Station Rulemaking

On December 2, 1980, EPA promulgated regulations to implement a portion of section 169A of the Act which was added to the Act in 1977. Those regulations required the States to adopt and submit State implementation plans (SIP's) to prevent future visibility impairment from new sources, to monitor existing conditions, to develop long-term strategies for remedying existing impairment, and to address impairment which was identified by the Federal land manager (FLM) for the area and is reasonably attributable to a single source or a small group of sources. The Environmental Defense Fund (EDF) sued EPA because 35 States, including the State of Arizona, failed to submit their SIP's. Under a court-sanctioned settlement agreement with EDF, EPA has promulgated Federal implementation plans (FIP's) for those States which failed to submit their SIP's by revised deadlines. The EPA has promulgated the FIP's in several parts; new source review regulations and monitoring programs first, long-term strategies second, and then actions on existing impairment which were identified by the FLM's. The final actions required by the settlement agreement involved addressing visibility impairment in the Grand Canyon National Park which is attributable to the Navajo Generating Station in Page, Arizona.

In the winter of 1987, the National Park Service conducted a tracer study in the Colorado Plateau area which includes the Grand Canyon National Park and the Navajo Generating Station. As a result of that study, on September 5, 1989, EPA proposed to attribute a portion of the wintertime visibility in the Grand Canyon National Park to the Navajo Generating Station. On February 8, 1991, EPA then proposed to require the source to reduce its emissions.

TRANSPORT COMMISSIONS AND NAVAJO RULEMAKING (CONTINUED)

Current Status

Transport Commissions

The Administrator established the Grand Canyon Visibility Transport Region to include all or part of the following States: Arizona, California, Colorado, Nevada, New Mexico, Oregon, and Utah. The Administrator invited the Governors of those States and heads of the National Park Service, Bureau of Land Management, and U.S. Forest Service or their representatives to join the Regional Administrator from Region IX and the Assistant Administrator for Air and Radiation on the Grand Canyon Visibility Transport Commission. At its first meeting the Commission adopted by-laws, elected officers including Governor Fife Symington of Arizona as Chairman, and requested a committee of Federal and State representatives develop a draft work plan for the Commission.

Navajo Generating Station Rulemaking

After the close of the official comment period, at EPA's suggestion, representatives of the Salt River Project (SRP) on behalf of the owners, and representatives of Grand Canyon Trust (GCT) and EDF on behalf of the environmental organizations, held several meetings to negotiate a compromise plan. As a result of those meetings, representatives of SRP, GCT, and EDF signed a memorandum of understanding which recommends that EPA adopt a plan with the following elements:

- A sulfur dioxide emission limit of 0.10 lbs/MMBtu of heat input with compliance determined on an annual rolling average basis
- The emission limitation to be phased in by unit in 1997, 1998, and 1999
- The Navajo Generating Station would conduct 6 weeks of scheduled maintenance during the winter months.

A final rule based upon the agreement was announced by President George Bush on September 18, 1991 and was published in the Federal Register on October 3, 1991.

On December 2, 1991, the Central Arizona Water Conservation District (CAWCD) petitioned the U.S. Court of Appeals to review the rule. The CAWCD receives water pumped by electricity produced by the Navajo Generating Station.

TRANSPORT COMMISSIONS AND NAVAJO RULEMAKING (CONTINUED)

Future Milestones

Transport Commissions

The committee which is developing the draft work plan for the Commission expects to release it for public comment in early February and hold a public meeting on it in late February 1992. The plan is to be presented at the next Commission meeting scheduled for March 1992.

Navajo Generating Station Rulemaking

The Navajo Generating Station is starting the design and procurement of the equipment necessary to meet the new requirements.

Written arguments in the CAWCD appeal of the final rule are expected to occur in 1992, but no date has been set.

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EMISSION FACTOR REVIEW

Background

Section 804 of the Clean Air Act (Act) requires that the Administrator will review, and if necessary, revise, the methods (emission factors) used to estimate the quantity of emissions of carbon monoxide, volatile organic compounds, and nitrogen oxides. The review is required within 6 months of enactment and at least every 3 years, thereafter. Emission factors are also to be established for sources for which no such methods have previously been established by the Administrator. Section 804 also mandates public participation procedures in that the Administrator shall permit any person to demonstrate improved emissions estimating techniques and shall authorize the use of such techniques after review and approval.

Current Status

The Environmental Protection Agency (EPA) solicited input for the initial 6-month review via a notice which was mailed to 600 State and local agencies, environmental organizations and trade associations in February 1991. The EPA received comments and materials regarding several sections of the Compilation of Air Pollutant Emission Factors (AP-42), which could not be addressed in the initial 6-month time frame. The 6-month deadline was met by sending a notice of the availability of draft revisions to 27 AP-42 sections to the 600 organizations in mid-May. Comments on the draft sections were requested by July 15, 1991. Comments have been received from several of the Regional Offices and a few trade associations.

Seven of the sections are new or significantly revised. The other 20 sections involve minor editorial corrections only. The seven sections with major revisions are Residential Fireplaces; Residential Wood Stoves; Wastewater Collection, Treatment, and Storage; Polystyrene; Portland Cement Manufacturing; Wet Cooling Towers; and Industrial Flares.

Future Milestones

The 27 sections were finalized as Supplement D to AP-42 Volume I in October 1991. The review and revision process will be established on an ongoing 3-year cycle. Updates will be made to AP-42 as information becomes available, probably on a yearly basis.

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EMISSION FACTOR REVIEW (CONTINUED)

The draft AP-42 Sections are available in Wordperfect format via the Office of Air Quality Planning and Standards' Technology Transfer Network on the Clearinghouse for Inventories Emission Factors bulletin board system.

U.S.-MEXICO BORDER AIR QUALITY STUDIES

Background

The 1983 United States-Mexico Border Environmental Agreement established American and Mexican National Coordinators to supervise enhanced, cooperative border environmental studies. An air work group was formed to facilitate technology transfer and project planning; this was composed of representatives from the Environmental Protection Agency's (EPA's) Regions VI and IX, the State of Texas, the City-County of San Diego, the City of El Paso, and EPA's Mexican counterpart, the Secretariat of Urban Development and Ecology (SEDUE). Annex IV to this 1983 Border Agreement was approved by each country in January 1987 and resulted in additional emission controls or production limitations on two essentially uncontrolled Mexican copper smelters near the Arizona border.

The two countries approved Annex V to the 1983 Agreement in October 1989; this annex legally commits both countries to performance of air monitoring, emissions inventorying, and air modeling to identify the most efficient and acceptable control strategies to combat international urban air pollution transport along the border. Stimulated by FY 1989 and FY 1990 special Congressional allocations, field studies took place in El Paso, Texas-Ciudad Juarez, Chihuahua, Mexico in February 1989, December 1989, September 1990, December 1990, and April 1991 and have included LIDAR flights, visibility and particulate matter nominally 10m and less (PM-10)/PM-25) sampling, long- and short-term meteorological studies for windfield model evaluations, the establishment of a long-term Juarez air monitoring network (PM-10: four sites; ozone: two sites; carbon monoxide: two sites; meteorology: two sites), and emissions inventorying of Juarez mobile, stationary, and area sources. El Paso-area ambient problems include those for ozone, carbon monoxide, and PM-10. Annex V is currently being modified to include San Diego-Tijuana and Mexicali-Imperial County, California, in addition to the El Paso-Ciudad Juarez emphasis area.

In the Mexicali-Imperial County area, an EPA contractor has prepared a study protocol for PM-10 receptor modeling on each side of the border. This protocol provides for study start-up in fall 1991. In Tijuana, SEDUE has agreed to establish a long-term monitoring station at a local university campus to provide the first baseline air quality information from that city.

Action plans for air quality improvement in each of these three border areas have been included in the EPA-SEDUE document "Integrated Environmental Plan for the Mexico-U.S. Border Area."

U.S.-MEXICO BORDER AIR QUALITY STUDIES (CONTINUED)

Current Status

In El Paso-Ciudad Juarez, the long-term monitoring network (begun in June 1990) continues operation at four locations in Juarez. The Juarez stationary source emissions inventory work continues, while the EPA Office of Mobile Sources is assisting Region VI in using the MOBILE model to calculate Juarez fleet emissions factors. The EPA Region VI contractors are evaluating whether dispersion or receptor models are appropriate to simulate air quality in El Paso-Ciudad Juarez and what type of windfield model is applicable, if dispersion modeling is used.

In Tijuana, the first air quality monitoring station is operating in an experimental mode. The roles of the participating agencies have been defined as follows: SEDUE--site location and daily operation; EPA--instrumentation, funding, and overall coordination; California Air Resources Board (CARB)--provide periodic quality assurance; and San Diego Air Pollution Control District (SDAPCD)--provide weekly quality assurance and routine maintenance. The EPA, SEDUE, CARB, and SDAPCD have also been meeting to discuss the reduction of motor vehicle emissions in the San Diego/Tijuana border area with particular emphasis on those vehicles used for commuting on a regular basis from Tijuana to San Diego.

In Mexicali-Imperial County, a study plan has been developed to acquire chemically speciated measurements at sources and receptors, and to apply receptor models to apportion PM-10 to its sources. The EPA and SEDUE are working with a contractor, the Desert Research Institute, as well as the Imperial County Air Pollution Control District and CARB. The EPA is currently securing a contractor to begin implementation of the study plan.

Future Milestones

For El Paso-Ciudad Juarez, the following are milestones through FY 1992:

1. Performance of a vehicle miles traveled study in Juarez (10/91-4/92)
2. Determination of whether to use dispersion and/or receptor models (6/91-10/91)
3. Determination of what type of windfield model to use in dispersion modeling (11/91)
4. Continue operation of long-term Juarez inventory (through 9/92)

U.S.- MEXICO BORDER AIR QUALITY STUDIES (CONTINUED)

5. Refine Juarez stationary source, area source inventory and obtain final mobile source inventory (through 9/92)
6. Installation of voltage controllers on Juarez ambient samplers/monitors (through 9/92)
7. Performance of visible emissions and combustion evaluation training for SEDUE personnel (9/91-3/92)
8. Performance of stack testing for selected Juarez sources and related training for SEDUE engineers (2/92-9/92)
9. Provision of support to SEDUE on the Inspection and Maintenance (I/M) program start-up (through 9/92).

For Tijuana-San Diego, future plans include:

1. The accumulation and analysis of data from the existing monitoring station
2. The development of three additional Tijuana monitoring sites (as proposed in the IBEP)
3. The development of a strategy to reduce motor vehicle emissions with a particular emphasis on those vehicles used for commuting on a regular basis from Tijuana to San Diego.

For Mexicali-Imperial County, future plans include:

1. Estimation of the spatial and temporal distribution of PM-10 concentrations in Mexicali and Imperial County
2. Apportion PM-10 concentrations to source emissions
3. Estimate cross-border fluxes of PM-10
4. Finalize control strategy
5. Implement a control strategy.

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QUALITY ASSURANCE AUDIT REQUIREMENTS FOR EMISSION TESTING

Background

The Environmental Protection Agency (EPA) has been leading an effort to place renewed emphasis on the test method performance audit program. Many of the test methods in 40 Code of Federal Regulations, Part 60, currently contain a performance audit requirement. Audit materials for these and other test methods are available from EPA through the Quality Assurance Division of the Atmospheric Research and Exposure Assessment Laboratory. Results of EPA surveys indicate that State agencies are not applying the audit requirement consistently. Most State agencies do not require audit sample analysis if the method or regulation does not specifically call for an audit, even if the audit material is available. The EPA Regional Office oversight of State and local audit programs is also haphazard. Most Regional Offices have directed States to implement compliance test auditing, but have not followed up this directive with the needed guidance and oversight.

Current Status

The Stationary Source Compliance Division and the Technical Support Division of the Office of Air Quality Planning and Standards co-authored a memorandum dated May 22, 1991 to the Directors and Branch Chiefs of the Regional Air Offices. The memorandum expressed concerns with the current audit programs and urged the Regional Directors to take the steps necessary in order to remedy the situation. The audit program has also been a topic of discussion at the Emission Measurement Technical Information Center workshops in Chicago and Los Angeles, as well as the Air Quality Management Training Workshop in Greensboro, North Carolina.

Future Milestones

The EPA will continue to encourage the placement of performance audit requirements in upcoming regulations relating to the Clean Air Act Amendments of 1990. The EPA plans to include audit requirements when developing future test methods and when amending current test methods.

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AREA AND MOBILE SOURCE SUBSYSTEM (AMS)

Background

The Aerometric Information Retrieval System (AIRS) serves as the Environmental Protection Agency's (EPA's) principal management information system for air pollution data. The AIRS consists of a number of subsystems. The AIRS AMS is being developed to calculate, store and retrieve emissions estimates for area and mobile sources. With the passage of the Clean Air Act (Act), an area and mobile source system is necessary to support Title I of the Act. The system will need to store area and mobile source emissions data reported by State/local agencies and provide comprehensive capabilities for tracking of agency reporting and inventory approval status.

Current Status

The AMS, when completed, will be operational on the Environmental Protection Agency's (EPA's) mainframe computer center with telecommunications access capabilities for State/local agencies. The AMS is presently in the design stage. The design effort began in 1990 with the development of a detailed user requirements analysis. To support the early needs of State/local agencies who must prepare and submit to EPA area/mobile source inventories for ozone and carbon monoxide nonattainment areas, an initial PC-based version of AMS was developed. Distribution to users was made during July and August 1991.

Future Milestones

The initial version of the PC-based AMS will permit State/local agencies to enter data into the system and transmit it to EPA in 1992 when the inventories are due and when the AMS mainframe system will be operational. Additional upgraded versions of the personal computer system will be released in early 1992. For the AMS mainframe system, the physical data base design document and the detailed system specifications document will be completed in August. Additional detailed program specifications and program coding activities will be completed over the next 18 months. The key milestones to be achieved are to have the "State side" of AMS operational by May 1992 and the "EPA side" operational by November 1992. The "State side" will store State-submitted data for State implementation plan emission inventories. The "EPA side" will provide the EPA the capability to calculate and store nationwide estimates of area and mobile source emissions on a county-by-county basis.

AREA AND MOBILE SOURCE SUBSYSTEM (AMS) (CONTINUED)

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STATEWIDE SUBMITTAL OF ANNUAL POINT SOURCE EMISSION DATA

Background

Since 1979, Environmental Protection Agency (EPA) regulations (40 Code of Federal Regulations 51.321-3) have required the States to provide EPA with statewide emission data for major stationary point sources. Data for the previous calendar year are due by the following July 1. The pollutant emission threshold for defining major sources for this notice are as listed.

total suspended particulates (TSP)	≥	100 tons/year
sulfur dioxide	≥	100 tons/year
nitrogen oxides	≥	100 tons/year
volatile organic compounds	≥	100 tons/year
carbon monoxide (CO)	≥	1,000 tons/year
lead	≥	5 tons/year

The TSP requirement has been replaced with a requirement for submittal of particulate matter emissions with no change in the threshold limit.

For Regional modeling and general purposes, States are encouraged to submit point source data for CO sources ≥ 100 tons per year.

Current Status

The AIRS Facility Subsystem (AFS), which houses the point source data, has been enhanced to better and more efficiently handle these submissions. For all of the Eastern U.S. and for much of Regions VI and VII, updated data on sources outside of the nonattainment areas will be critical to joint Office of Air Quality Planning and Standards-Regional Office applications of the Regional Oxidant Model planned for 1992 to 1993. For all areas, EPA regularly uses point source data for budget and program planning, national assessments such as trends, and for answering Freedom of Information Act requests and Congressional inquiries. It is essential that the data be current, comprehensive, and accurate. A review in May showed that only 39 percent of the data represented the past 3 years: 1988, 1989 or 1990. The data from many States have not been updated since 1985.

In response to this finding, EPA sent a memorandum to the Regional Offices on May 19 which outlined the current status of data by State and EPA Regional Office. On June 13, similar information was sent in a letter to each State Air Director.

STATEWIDE SUBMITTAL OF ANNUAL POINT SOURCE EMISSION DATA
(CONTINUED)

Future Milestones

On a quarterly basis, EPA will prepare a report which outlines the status of emission updates to the AFS data base. It is anticipated that these reports will be provided to the State and EPA Regional Offices. We will also continue working with the States to improve the data in AFS.

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GUIDELINE ON AIR QUALITY MODELS

Background

The Guideline on Air Quality Models, originally issued in April 1978, was revised September 1986, with Supplement A in January 1988. It is incorporated by reference in 40 Code of Federal Regulations 51.166 and 52.21 as applied to prevention of significant deterioration. The Guideline was prepared in response to the requirements of sections 165(e)(3)(D), 301, and 320 of the Clean Air Act.

In February 1991, the Environmental Protection Agency (EPA) published a notice of proposed rulemaking (NPR) on formal changes to the modeling guideline, Supplement B, to incorporate new techniques that enhance the regulatory modeling program. In addition, the notice proposes to give regulatory status to longstanding EPA policy regarding the use of air quality models for purposes of control strategy development, air quality maintenance area analyses, classification of regions for episode plans, and new source review. The NPR and Supplement B were subjected to public comment at the Fifth Conference on Air Quality Modeling on March 19-20, 1991. The docket was open for written comments until May 6, 1991.

Current Status

Comments from the fifth modeling conference and the public comment period have been summarized and responses are in preparation. Comments/responses will be submitted for regulatory work group review by October 1.

Future Milestones

Formal changes to the modeling guideline, Supplement B, should be promulgated by mid FY-1992.

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OFFICE OF AIR QUALITY PLANNING AND STANDARDS' (OAQPS')
TECHNOLOGY TRANSFER NETWORK (TTN)

Background

Over the past several years, OAQPS has provided support services in the form of technology transfer to State and local pollution control agencies as well as the private sector, mostly in the form of mailed documents and reports via the National Technical Information Service. Changes in computer technology as well as communications technology have made it possible for OAQPS to provide these services through computer transfer methods, specifically the electronic bulletin board service.

Current Status

A bulletin board service, the OAQPS TTN, has been developed to facilitate communications and provide access to information and technology related to air pollution control. The purpose of the network is to foster technology transfer among all parties interested in the solution of the Nation's air pollution problems. The OAQPS TTN is designed to be user-friendly and readily accessible from anywhere in the country. It is a forum for technical interchange among the Environmental Protection Agency (EPA), State and local agencies, and the private sector.

Presently, the network offers bulletin boards in the areas of air quality modeling, emission measurement technology, emission inventories and emission factors, control technology, air pollution training, and the Clean Air Act. All bulletin boards on the network can be accessed through one telephone number; the number is (919) 541-5742.

Future Milestones

In the coming year, additional bulletin boards are planned in the areas of new source review, ambient monitoring technology, and the aerometric information retrieval system.

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AIR POLLUTION TRAINING INSTITUTE

Background

The passage of the Clean Air Act (Act) impacted upon almost all of the 36 classroom courses and 37 self-instructional courses offered by the Air Pollution Training Institute. Needed changes in course content range from simple updates to major revisions. It is also apparent that new courses addressing new requirements (e.g., permitting) must be developed. More course presentations are also required, especially to meet the needs of expected new employees of the Environmental Protection Agency (EPA) and State and local air pollution control agencies.

Current Status

In support of the programs cited above, two major funding efforts are under way. The first involves a grant to North Carolina State University for course redevelopment, audiovisual products development, and advanced delivery systems.

A contract to continue support provided by Research and Evaluation Associates, Inc. (REA) in the operation of the current training delivery system is in pre-award negotiations. Work is under way to establish the schedule of training courses for 1992. There will be several new courses in place for next year, as well as several of the revisions of existing courses.

Future Milestones

Negotiations will begin soon with the Area Training Centers and our independent contractors for training course delivery in 1992.

The North Carolina State University will be developing a national videoconference on new source review and prevention of significant deterioration.

The REA will be completing the revision of the "Continuous Emissions Measurements Course" by the end of the calendar year. Revision of Course SI:422, "Air Pollution Orientation Course" and Course 452, "Principles and Practice of Air Pollution Control" are under way.

A demonstration project for the delivery of inspection compliance training is planned. This program is a cooperative effort between two Office of Air Quality Planning and Standards' Divisions (the Stationary Source Compliance Division and the Air Quality Management Division).

AIR POLLUTION TRAINING INSTITUTE (CONTINUED)

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STATUS OF THE REVIEW AND REVISION OF AMBIENT AIR STANDARDS

Background

The Clean Air Act (Act) gives the Environmental Protection Agency (EPA) authority to set national ambient air quality standards (NAAQS) for pollutants that may detrimentally affect public health or welfare and are emitted from numerous and diverse sources. Primary NAAQS are set to protect public health while secondary NAAQS are set to protect public welfare (e.g., vegetation, wildlife, and visibility).

The Act requires EPA to periodically review, and if needed, revise NAAQS and the criteria upon which NAAQS are based. To review the NAAQS criteria, EPA develops a Criteria Document (CD). The CD summarizes the latest scientific knowledge concerning the health and welfare effects of the pollutant. Another document prepared in the NAAQS review process is the Staff Paper (SP). The SP describes how the information in the CD is used to set standards. These, and other relevant documents, are reviewed by the Clean Air Scientific Advisory Committee (CASAC) as part of the NAAQS review.

In the early 1970's, EPA set NAAQS for ozone, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter nominally 10 microns or less (PM-10), carbon monoxide (CO) and nonmethane hydrocarbons. In 1978, the EPA promulgated a NAAQS for lead (Pb) and in 1983, EPA revoked the NAAQS for nonmethane hydrocarbons.

Current Status

Ozone

In 1979, the primary and secondary standards for ozone were set at 0.12 ppm, hourly average. Review of the standards was initiated in 1981, and, in 1989, CASAC completed its review of the CD and SP. Although there was a split regarding tightening the primary NAAQS, most CASAC members supported tightening the secondary NAAQS to 0.10 ppm.

Currently, review of the ozone standards continues, with special attention being focused on longer-term health effects and the appropriate averaging time for controlling welfare effects. The EPA has also embarked on an enhanced effort to attain the current ozone standard, with new authority provided by the Act. This effort is supported by an increasingly strong data base on the health and welfare effects of ozone exposure.

SO_2

The two primary standards for SO_2 were set in 1971 at 0.03 ppm, annual average and 0.14 ppm, maximum 24-hour average. In

STATUS OF THE REVIEW AND REVISION OF AMBIENT AIR STANDARDS
(CONTINUED)

1973, the secondary standard was set at 0.5 ppm, 3-hour average. Review of the standards began in 1977, and CASAC completed its review of the CD and SP in 1987. The EPA announced its proposed decision not to revise the existing SO₂ standards in 1988. The proposal also solicited comment on whether a separate 1-hour primary standard of 0.4 ppm was needed. Currently, review of the SO₂ standards continues in light of the comments on the 1988 proposed decision not to revise.

Lead

The NAAQS for lead were set at 1.5 µg/m³, quarterly average, in 1978. Review of the standards began in 1983. In 1990, CASAC completed its review of the CD, the SP, and a report detailing the methodology used to estimate lead exposures. Currently, EPA is integrating the review of the lead NAAQS with other projects included in the 1991 Agency-wide Strategy for Reducing Lead Exposures. In particular, the lead NAAQS has been linked to a rule being developed by the Office of Toxic Substances to encourage the recycling of lead-acid batteries.

CO

The two primary and identical secondary standards for CO were set in 1971 at 9 ppm (8-hour average), and 35 ppm (hourly average). In 1985, EPA reaffirmed the primary standards for CO and revoked the secondary standards. Review of the standards was initiated in 1988 and CASAC reviewed a draft of the revised CD in 1991. The EPA is developing the SP for CASAC review in March 1992.

NO₂

In 1971, the primary and secondary NAAQS for NO₂ were set at 0.053 ppm, annual average. The EPA retained these standards in 1985, based on its initial review of the standards. The second round review of the standards was initiated in 1988. The EPA is currently developing the CD for review in May 1992.

PM-10

The PM-10 standards were set at 50 µg/m³ (annual average) and 150 µg/m³ (24-hour average) in 1987. The next review of these standards is scheduled to begin in 1992.

Future Milestones

Ozone: No review-related milestones at this time

STATUS OF THE REVIEW AND REVISION OF AMBIENT AIR STANDARDS
(CONTINUED)

SO₂: Reaffirmation of the standards or reproposal is
 anticipated in spring 1992

Lead: A proposal to revise the standard is anticipated
 in mid-1992

CO: CASAC review of SP March 1992

NO_x: CASAC review of draft CD May 1992

PM-10: Initiate development of revised criteria in 1992

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INDOOR AIR PROGRAM

Background

In Title IV of the 1986 Superfund Amendments and Reauthorization Act (SARA), Congress authorizes the Environmental Protection Agency (EPA) to: (1) establish a federally-coordinated indoor air research program, (2) disseminate information on indoor air pollution and mitigation techniques, and (3) assess the appropriate Federal role in solving indoor air pollution problems.

Several of the major activities which EPA has carried out in order to implement this legislation are as follows:

In August 1989, EPA submitted a Report to Congress on Indoor Air Quality, pursuant to SARA Section 403(e). This report included an Executive Summary and Recommendations, Volume I: Federal Indoor Air Quality Activities, Volume II: Assessment and Control of Indoor Air Pollution, and Volume III: Indoor Air Pollution Research Needs Statement. In this report, EPA recommended an expanded indoor air research program, the development of guidelines for ventilation and other building practices, an expanded technical assistance and information dissemination program, and a program to characterize the extent of indoor air quality (IAQ) problems nationally and to develop methods for diagnosing and controlling those problems.

The EPA is one of the four Federal agency co-chairs of the interagency Committee on Indoor Air Quality (CIAQ) and organizes the four quarterly meetings of the CIAQ. Using information supplied by the CIAQ members, EPA issues a publication called Current Federal Indoor Air Quality Activities, which is updated annually. The EPA has also published a number of publications on indoor air topics for the public: a booklet for citizens on indoor air quality, published jointly with the Consumer Product Safety Commission, called The Inside Story: A Guide to Indoor Air Quality; a Directory of State Indoor Air Contacts, revised by the Public Health Foundation in February 1991; a nationwide survey of indoor air quality diagnostic and mitigation firms which is currently being updated; and a series of fact sheets on topics of special interest (e.g., Ventilation and Office Buildings, the Sick Building Syndrome, Environmental Tobacco Smoke, Residential Air-Cleaning Devices, and Use and Care of Home Humidifiers).

Current Activities

Much of the current emphasis in EPA's indoor air program is on the development and dissemination of guidance documents on specific aspects of IAQ for key concerned audiences. The EPA works cooperatively with other Federal agencies and private

INDOOR AIR PROGRAM (CONTINUED)

sector organizations, whenever possible, to ensure that these guidance documents reflect the best, most current understanding of the nature and solutions to IAQ problems.

Documents currently under development include: prevention of IAQ problems in the construction of new homes (primarily for homebuilders); development of environmental tobacco smoke policies for the work place (primarily for corporate policy-makers, occupational safety administrators, and facility managers); prevention of IAQ problems in the construction and remodeling of large-scale buildings (primarily for architects and building engineers); IAQ management in schools (primarily for school administrators); and diagnosis and mitigation of IAQ problems in large-scale buildings (primarily for building owners and facility managers). This latter document was written in partnership with the National Institute for Occupational Safety and Health.

The Indoor Air Division considers training to be a fundamental component of an effective, nonregulatory strategy. Part of the decision to undertake development of guidance for a particular audience is an assessment of the training needs of that group as well. A self-paced learning module on IAQ, including lessons on sources, health effects, diagnostic and mitigation strategies, existing standards and guidelines, and suggestions for public sector outreach and education activities has been developed specifically for State and local environmental and public health officials. This learning module, and a companion reference book, will soon be available from the Indoor Air Division. A live, 2-day training course covering these topics has also been developed for the public sector audience, and will be made available through individual EPA Regional Offices and training centers. A workshop for building owners and facility managers to introduce them to the guidance book on IAQ is now under development. As additional guidance documents are developed, training needs will be assessed, and appropriate educational tools will be developed.

Planning for a national study of the IAQ in public and commercial buildings was begun in FY 1991. The two major objectives of this 3 to 5-year study are to (1) develop baseline information on the factors believed to determine IAQ in large buildings and assess their relationship to occupant health symptoms, and (2) improve and standardize the IAQ investigative approach. A steering committee of experts on IAQ investigation was convened to develop and oversee the study, teams were formed to define the study elements and to recommend the methods and measurement protocols to be employed. This information will be useful to public health departments and building diagnosticians, to indoor air/health effects researchers, to ventilation

INDOOR AIR PROGRAM (CONTINUED)

engineers and building designers, and as input for the further development of Federal guidance on IAQ issues.

There are a number of other activities under way in the Indoor Air Division that should be of particular interest to State and local governments:

- o Several multiyear studies on such topics as the economic impact of indoor air pollution and on the nature and prevalence of multiple chemical sensitivity (MCS) are proceeding. A preliminary report on the first phase of a study on the costs of controlling indoor air pollution will soon be available. The National Academy of Sciences is scheduled to report back to the Division on the recommendations of a workshop convened by the Academy, at EPA's request, to develop a research agenda on MCS.
- o Development of a national IAQ information clearinghouse is progressing as planned. The design phase has been completed, and operation is scheduled to commence in April 1992. Among the key target audiences are State and local environmental and public health officials.
- o A multiyear effort to evaluate mechanisms for credentialing providers of indoor air diagnostic and mitigation services is continuing. While preliminary discussions last year indicated that credentialing in the field of IAQ was premature, dialogue has continued among professional and trade associations in the IAQ arena to promote increased understanding across the range of disciplines involved in indoor air issues.
- o Working cooperatively with the American Lung Association (ALA), the Division is developing a brief guide for primary care physicians on diagnosing and treating patients with health problems resulting from exposure to pollutants indoors. This booklet is scheduled for distributed to physicians through the ALA in the spring of 1992.
- o The EPA continues to publish fact sheets on topics of interest. A brochure on combustion appliances and IAQ will be published in partnership with the Consumer Product Safety Commission.

Future Milestones

In the near future, emphasis will be placed on the completion of fundamental guidance documents for the range of key IAQ audiences. As these guidance materials are completed,

training and targeted outreach programs will be designed to ensure their use by the intended audience.

Copies of the EPA indoor air publications that have been issued are available from the EPA Public Information Center (PM-221B), 401 M Street S.W., Washington, D.C. 20460.

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AIR/SUPERFUND COORDINATION PROGRAM

Background

The purpose of the Air/Superfund Coordination Program is to assist the Environmental Protection Agency (EPA) Regional Superfund Offices in evaluating Superfund sites, developing plans for site cleanup, and implementing cleanup actions.

An Air/Superfund Coordinator in each Regional Office assists in the review of proposals, plans, and studies pertinent to the evaluation of air impacts from Superfund sites. They also participate in decisions related to cleanup actions that may have significant air impacts. Regional Air Offices also may assist in field evaluations and consultations with contractors.

Current Status

The program includes a number of activities to support the Regional Air and Superfund offices. These are:

1. Coordination to facilitate the exchange of information on Air/Superfund issues, procedures, and data among Regional Air Offices and between Regions and EPA Headquarters offices; and to provide updated technical information and reports.
2. Training to brief Regional and contractor personnel on air issues and on guidance available for analyzing and resolving them.
3. Technical assistance in analyzing air issues associated with specific sites, reviewing analyses prepared by Superfund contractors, and preparing recommendations on remedial actions where there may be significant air impacts.
4. Preparation of National technical guidance (NTG) studies to provide data and guidance to improve the quality of the data base and the analysis of air issues associated with Superfund sites.

Reports completed or in process.

o Air Pathway Analysis (4 volumes)

- Volume 1 - Overview
- Volume 2 - Emission Estimates, Preremedial
- Volume 3 - Emissions Estimates, During Remediation
- Volume 4 - Modeling, Monitoring Guidance

AIR/SUPERFUND COORDINATION PROGRAM (CONTINUED)

- o Data Quality Objectives for Ambient Monitoring Around Superfund Sites
- o Comparisons of Air Stripper Simulations and Field Performance Data
- o Air Pathway Analysis Review Checklists
- o Soil Vapor Extraction VOC Control Technology Assessment
- o Development of Example Procedures for Evaluating the Air Impacts of Soil Excavation Associated with Superfund Remedial Actions
- o User's Guide for the Fugitive Dust Model
- o Air Stripper Design Manual
- o Expert System for Screening Techniques
- o Application of Long Path Monitors to Superfund Sites
- o Air Impacts from Alternative Remedial Cleanup Options
- o Emission Screening/Ranking at Superfund Sites
- o Air Impacts from Superfund Sites
- o Less than Lifetime Risks

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RADIONUCLIDE - NATIONAL EMISSION STANDARDS

Background

The national emission standards for hazardous air pollutants, limiting the release of radionuclides to the atmosphere from over 6,000 facilities, were published on December 15, 1989.

Source Category	Approximate Number of Facilities
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Department of Energy (DOE) Facilities	45
Nuclear Regulatory Commission Licensees and Non-DOE Federal Facilities	6,000
Nuclear Reactors and Support Facilities	135
Underground Uranium Mines	15
Uranium Mill Tailings (Disposal)	46
Uranium Mill Tailings (Operations)	4
DOE Radon Sources	5
Phosphogypsum Piles (Stacks)	66
Elemental Phosphorus Plants	5

The standards for Nuclear Regulatory Commission (NRC) licensees and non-DOE Federal facilities were stayed pending resolution of NRC's concern that the standards represent dual regulation and may have adverse affects on the use of nuclear medicine.

In the Clean Air Act (Act), Congress gave the Environmental Protection Agency (EPA) the authority not to regulate NRC licensees under section 112 if EPA makes a determination, by rule and in consultation with the NRC, that the NRC's regulatory program protects the public health with an ample margin of safety.

RADIONUCLIDE--NATIONAL EMISSION STANDARDS (CONTINUED)

Current Status

On March 10, 1991, Subpart I went into effect for Federal facilities. Also, the determination concerning adequacy of the NRC regulatory program contemplated by the language in section 112 (d)(9) could not apply to such facilities.

On April 15, 1991, the Administrator issued a final rule staying Subpart I as it applies to NRC licensees other than those engaged in commercial nuclear power generation until November 15, 1992. This stay is required to gather additional information to determine whether members of the general public are protected by an ample margin of safety from radionuclide air emissions from thousands of NRC licensed facilities that are not well characterized.

On March 8, 1991, EPA issued an advanced notice of proposed rulemaking announcing EPA's intention to enter into a future rulemaking pursuant to section 112(d)(9) to rescind Subpart I as applied to nuclear power reactors. A public hearing on the proposal to stay 40 Code of Federal Regulations (CFR), Part 61, Subpart I, for NRC licensees engaged in the generation of commercial nuclear power was held on May 9, 1991. A Federal Register (FR) notice proposing to rescind 40 CFR, Part 61, Subpart I, for commercial nuclear power reactors appeared August 5, 1991.

On May 16, 1991 the Administrator signed a FR notice extending an existing class waiver for permitting phosphogypsum for agricultural compliance. The current extension expired on October 1, 1991. The EPA is now considering a request for another extension through the 1992 growing season.

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RADON ACTION PROGRAM

Background

The Environmental Protection Agency (EPA) established the Radon Action Program in 1985. Since then, high radon levels have been found in every State. Program activities have been expanded each year in response to the growing scope and complexity of the radon problem. In October 1988, the Indoor Radon Abatement Act (IRAA) was signed into law (15 U.S.C. 2661-2671), setting a new long-term national goal that indoor radon levels equal those found outdoors. The mission of the Radon Action Program is to significantly reduce the public health risks associated with radon exposure through a partnership with the States, other Federal agencies, national organizations, and the private sector. The program consists of four main elements: problem assessment, mitigation and prevention, capability development, and public information.

Current Status

The EPA is undertaking a variety of activities to address the public health threat posed by exposure to radon. These activities include the following.

- o Assessing the scope and magnitude of the problem through residential, school, and Federal buildings surveys and through health effects research
- o Assisting States with program development through grants and other assistance
- o Assuring the quality and credibility of the radon industry through the evaluation of measurement and mitigation methods and the operation of measurement and mitigation contractor proficiency programs
- o Developing model construction standards for radon prevention in new homes and other buildings
- o Establishing regional radon training centers
- o Providing public information through brochures and a national education campaign in cooperation with the Advertising Council, the revision of A Citizen's Guide to Radon, and cooperative efforts with national and local organizations

Future Milestones

In 1992, EPA will continue the State grant program in which 50 States, the District of Columbia, and Guam participated in

RADON ACTION PROGRAM (CONTINUED)

1991. They will complete the revision of the citizen's guide, continue public information programs with the Advertising Council and other national and local organizations, publish the model construction standards, and issue results of the national school survey. The EPA will also continue the measurement and mitigation contractor proficiency programs.

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