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1

June 7, 1988

MEMORANDUM

SUBJECT Revised Model Clearinghouse Operational Plan

FROM: Joseph A. Tikvart, Chief *J. Tikvart*
Source Receptor Analysis Branch (MD-14)

TO: Chief, Air Branch, Region VII
Chief, Technical Support Branch, Region I
Chief, Air and Radiation Branch, Region V
Chief, Air Programs Branch, Regions II, III, IV, VI, VIII, IX, X

On February 9, 1988 I notified you of the expansion of the Model Clearinghouse to include all criteria pollutants. That memorandum explained briefly how the expanded Clearinghouse would operate and identified individuals in the Technical Support Division and in the Air Quality Management Division who would be involved in resolving Agency regulatory modeling issues. The memorandum also promised that we would be revising the 1981 Operational Plan for the Model Clearinghouse to reflect the current operation. Attached is a copy of that revised plan.

To highlight major functions of the operational plan which you should become most familiar with, please note the structure of the Clearinghouse contained in Section 3, particularly Figure 1. Also you should become familiar with the procedures for referring modeling issues to the Clearinghouse, described in Section 4. Appendix B identifies the contacts in the Regions for various types of modeling problems. Please check over these lists for accuracy and keep us informed of any changes of these personnel in your Region.

It should be remembered that the Model Clearinghouse is a service we provide to the Regional Offices. We do not normally deal directly with the State/local agencies or with industry since this would compromise our function as second level reviewers and would interfere with your function. However we have discussed access by States to Clearinghouse expertise through the Regional Offices. Where a State wishes such a contact, we urge your staff to work closely with their State counterparts to establish a mutually agreed-upon position on the issue.

Finally, for purposes of responding to questions from States and local agencies about the Clearinghouse and its operation, we have no problem if you wish to furnish them with a copy of this plan. For questions from the public we would prefer that you instead provide them with a copy of Appendix C, a separate copy of which is attached. This Appendix is a revised version of a flyer we have distributed for a number of years at the EPA booth at the annual APCA meeting.

EPA Model Clearinghouse Summary

The Model Clearinghouse is the single EPA focal point for reviewing the use of modeling techniques for criteria pollutants in specific regulatory applications. The Clearinghouse also serves to compile and periodically report for Regional Office benefit Agency decisions concerning deviations from the requirements of the "Guideline on Air Quality Models (Revised)."

Need for the Model Clearinghouse

The Guideline states that when a recommended model or data base is not used, the Regional Administrator may approve the use of other techniques that are demonstrated to be more appropriate. However, there is also a need to provide for a mechanism that promotes fairness and consistency in modeling decisions among the various Regional Offices and the States. The Model Clearinghouse promotes this fairness and uniformity and also serves as a focal point for technical review of "nonguideline" techniques proposed for use/approval by a Regional Administrator.

Functions of the Model Clearinghouse

The major function of the Clearinghouse is to review specific proposed actions which involve interpretation of modeling guidance, deviations from strict interpretation of such guidance and the use of options in the guidance, e.g., Regional Office acceptance of nonguideline models and data bases. This is handled in two ways: (1) the Clearinghouse, on request from the Regional Office, will review the Region's position on proposed (specific case) use of a nonguideline model for technical soundness and national consistency, and (2) the Clearinghouse will screen Federal Register regulatory packages for adherence to modeling policy and make recommendations for resolution of any issues identified.

A secondary function of the Model Clearinghouse is to communicate to regulatory model users in EPA significant decisions involving the interpretation of modeling guidance. This is accomplished through an annual "Clearinghouse Report" which itemizes the significant decisions that have been made and the circumstances involved. This report serves to improve consistency in future decisions and as a source of technical information for the Regional Offices. In addition to the annual report the Clearinghouse informs users on a contemporary basis of significant decisions through copies of written decisions and briefings at various meetings and workshops.

Structure of the Clearinghouse

The Clearinghouse is formally located in the Source Receptor Analysis Branch (SRAB) of OAQPS. However, the Air Quality Management Division (AQMD) also participates in Clearinghouse matters involving SIP attainment strategies and other regulatory functions.

The primary responsibility for managing the Clearinghouse and ensuring that all of its functions are carried out is performed by a person full-time within SRAB. The responsibility for responding to requests for review of modeling issues is assigned, on a pollutant/program basis to three SRAB individuals. In addition, AQMD supports the Clearinghouse with staff who are also knowledgeable in modeling policy. These individuals are responsible for screening SIP submittals and related documents, referring modeling issues to SRAB through the Clearinghouse and documenting the final (and any significant interim) decision on disposition of the issues.

Communication Chain

The Model Clearinghouse functions within the organizational structure of EPA. As such the Clearinghouse serves the EPA Regional Offices. It coordinates with and communicates decisions to the Regional Offices. Any coordination with State and local agencies and individual sources on Clearinghouse activities is a function of the EPA Regional Offices.

If you have any questions please call me at FTS 629-5562.

Attachments

cc: J. Calcagni
R. Campbell
W. Laxton
D. Wilson
Regional Modeling Contact, Regions I-X
Regional EKMA Contact, Regions I-X
✓ Regional CO Contact, Regions I-X
Regional Receptor Modeling Contact, Regions I-X

MODEL CLEARINGHOUSE: OPERATIONAL PLAN

Revised

May 1988

**U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Technical Support Division
Source Receptor Analysis Branch
Research Triangle Park, North Carolina 27711**

Preface

Since 1981 the Office of Air Quality Planning and Standards (OAQPS) and the Regional Offices have successfully coordinated EPA's regulatory air modeling activities through the Model Clearinghouse. With the recent reorganization of OAQPS, all air quality modeling activities are now focused in the Source Receptor Analysis Branch (SRAB). This has allowed SRAB to devote greater attention to a broad scope of modeling needs and provided the basis for a logical expansion of the Clearinghouse to cover all criteria pollutants. This report describes the expanded Clearinghouse, its functions, organization and operating procedures.

TABLE OF CONTENTS

	<u>Page</u>
Preface.....	i
1.0 Introduction.....	1
1.1 Need for a Model Clearinghouse.....	1
1.2 Purposes of the Clearinghouse.....	4
1.3 Scope of This Plan.....	4
2.0 Functions of the Clearinghouse.....	6
2.1 Review of Proposed Regulatory Actions.....	6
2.2 Maintaining Awareness of Current Modeling Guidance and Historical Precedents.....	7
2.3 Communication of Decisions.....	9
2.4 Identifying Needs for Additional Modeling Guidance.....	10
3.0 Structure of the Clearinghouse.....	12
4.0 Clearinghouse Procedures.....	16
4.1 Advance Review of Proposed Modeling Techniques.....	16
4.2 Review of Regulatory Packages and Policy Issues.....	18
4.3 Documentation and Communication of Results.....	20
5.0 References.....	22
Appendix A. History of the Model Clearinghouse.....	A1
Appendix B. Model Clearinghouse Personnel.....	B1
Appendix C. Summary of EPA Model Clearinghouse.....	C1

MODEL CLEARINGHOUSE: OPERATIONAL PLAN

1.0 Introduction

The Model Clearinghouse is the single EPA focal point for review of air quality simulation models proposed for use in specific regulatory applications. The Clearinghouse also serves to compile and periodically publish Agency decisions concerning deviations from the requirements of the "Guideline on Air Quality Models (Revised)."¹

This plan describes the functions, structure and operating procedures of the Model Clearinghouse. It is directed to those EPA staff involved in the submittal and review of modeling techniques for either new source review or SIP revisions. The goal is to ensure that modeling techniques are technically sound and are consistent with current policy. The Clearinghouse promotes the use of the most appropriate models, the use of correct input to models and adherence to policy directives on how to use models.

1.1 Need for a Model Clearinghouse

Section 165 of the Federal Clean Air Act² states that with regard to PSD analyses, "The Administrator...shall specify with reasonable particularity each air quality model or models to be used under specified sets of conditions for the purposes of this part. Any models or models designated under such regulations may be adjusted upon a determination after notice and opportunity for public hearing, by the Administrator that such adjustment is necessary to take into account unique terrain or meteorological characteristics of an area potentially affected by emissions from a source applying for a permit required under this part."

In response to this requirement and other regulatory needs, the Office of Air Quality Planning and Standards (OAQPS) issued the "Guideline on Air Quality Models (Revised)¹". The Guideline recommends air quality modeling techniques that may be applied to air pollution control strategy evaluations and new source reviews, including prevention of significant deterioration. It is intended for use by EPA Regional Offices in judging the adequacy of modeling analyses performed by EPA, by State and local agencies, and by industry and its consultants. It also identifies modeling techniques and data bases for model input that EPA considers acceptable. The Guideline makes specific recommendations concerning air quality models, data bases, and general requirements for concentration estimates.

However, the Guideline also recognizes that (1) there are situations where the adjustment of the "preferred" air quality models is necessary to take into account unique terrain or meteorological characteristics of an area; (2) the developing state of modeling science may provide the opportunity for application of a new or revised model which is more appropriate than the recommended model; (3) for some classes of modeling problems the state of the modeling science does not provide a basis for identifying appropriate refined models; and (4) data base availability in particular situations may warrant deviations from the Guideline. To allow for these situations the Guideline states that when a preferred model or data base is not used, the Regional Administrator may approve the use of other techniques that are demonstrated to be more appropriate. The Guideline provides general criteria for determining the technical acceptability of alternative techniques. To assist Regional Office staffs in making such technical judgments, a mechanism is needed by which in-depth review of

alternate models can be performed. Access to Agency personnel who have specialized knowledge about specific types of modeling techniques is highly desirable.

Section 301a of the Clean Air Act² authorizes the Administrator to delegate authority for carrying out regulations and policies to the Regional Offices. However, this Section also requires the Administrator to ".....promulgate regulations establishing general applicable procedures and policies for regional officers and employees (including the Regional Administrator) to follow in carrying out a delegation... Such regulations shall be designed-

(A) to assure fairness and uniformity in the criteria, procedures, and policies applied by the various regions in implementing and enforcing the Act;

(B) to assure at least an adequate quality audit of each State's performance and adherence to the requirements of this Act in implementing and enforcing the Act, particularly in the review of new sources and in enforcement of the act; and

(C) to provide a mechanism for identifying and standardizing inconsistent or varying criteria, procedures, and policies being employed by such officers and employees in implementing and enforcing the Act."

Thus, although the Regional Administrator has the authority to specify models that are appropriate for use in a given situation, there is a need to provide for a mechanism that promotes fairness and consistency in modeling decisions among the various Regional Offices and the States.

1.2 Purposes of the Clearinghouse

To fulfill the needs described in Section 1.1, a Model Clearinghouse has been established in OAQPS. The primary purposes of the Model Clearinghouse are to provide:

1. A mechanism whereby the proposed acceptance by a Regional Office of a nonguideline model or alternative technique can be reviewed for national consistency before final approval by the Regional Administrator. Such reviews promote the use of equivalent acceptance criteria by all Regions.

2. A mechanism whereby the in-depth technical evaluation and/or performance evaluation of a proposed technique can be reviewed by those EPA personnel who are most familiar with the types of techniques to be employed.

3. A communication outlet for EPA's experience with the use of non-guideline models, data bases or other deviations from current guidance. The Clearinghouse maintains a high level of expertise on the applicability of various models and classes of models and allowed deviations from accepted procedures in specified circumstances. This information is communicated on a periodic basis to EPA personnel involved in regulatory model applications.

1.3 Scope of This Plan

The remainder of this plan describes the Clearinghouse and how it operates. Section 2 presents the functions of the Clearinghouse. Section 3 presents the structure of the Clearinghouse including personnel from both the Technical Support Division and the Air Quality Management Division of OAQPS who are involved. Section 4 provides the procedures to be followed in submitting material to the Clearinghouse and how the review of material, development of comments and the communication of relevant important infor-

mation to all parties is accomplished. Appendix A provides background information and a brief review of the Model Clearinghouse operations from its creation in 1980 to 1988. Appendix B lists OAQPS and Regional Office personnel assigned to Clearinghouse contact positions. Appendix C provides a summary of the Clearinghouse in a format suitable for release to individuals seeking information on this activity.

2.0 Functions of the Clearinghouse

The three main functions of the Model Clearinghouse are to: (1) review proposed regulatory actions that contain modeling issues; (2) develop and maintain a historical record of modeling decisions; and, (3) communicate decisions on regulatory modeling issues to all users. These functions are more fully described in Sections 2.1-2.3. As a byproduct of its operation the Clearinghouse is also in a position to identify needs for changes/clarifications of modeling guidance. This aspect of the Clearinghouse operation is described in Section 2.4.

2.1 Review of Proposed Regulatory Actions

The major function of the Clearinghouse is to review specific proposed actions which involve interpretation of modeling guidance, deviations from strict interpretation of such guidance and the use of options in the guidance, e.g., Regional Office acceptance of nonguideline models and data bases. This is handled in two ways:

1. The Clearinghouse, on request from the Regional Office, reviews the Region's position on proposed (specific case) use of a nonguideline model or other deviation from modeling guidance for technical soundness and national consistency.
2. The Clearinghouse screens regulatory actions, either in advance (upon request) or when officially submitted, for adherence to modeling policy and makes recommendations for resolution of any issues identified.

In the review of nonguideline models, the Clearinghouse first attempts to conduct the review within its own resources. The basis for the review is the available guidance and historical record discussed in Section

Expertise of the Clearinghouse personnel, and the

the Clearinghouse calls upon other EPA personnel with specific expertise to assist in the review of all or parts of the proposed nonguideline model as the need arises. In all cases the final outcome of the review takes the form of a single recommendation, with supporting rationale, to the Regional Office.

In the review of regulatory actions the Clearinghouse similarly attempts to first resolve any inconsistencies before requesting outside assistance. Again the basis for the review is the position submitted by the Regional Office, the available guidance, the record for analogous cases and the technical expertise of Clearinghouse personnel. In some cases it may be necessary to contact the Regional Offices to obtain additional information to resolve the issue.

2.2 Maintaining Awareness of Current Modeling Guidance and Historical Precedents

In order for the Clearinghouse to properly judge consistency in the interpretation of modeling guidance, it is necessary to maintain awareness of current modeling guidance and to be cognizant of past decisions involving the interpretation of this guidance in specific cases. The location of the Clearinghouse in OAQPS (See Section 3) allows for easy access and awareness of current modeling guidance. The primary basis for modeling policy considered by the Clearinghouse is the "Guideline on Air Quality Models (Revised)". Other written material including workshop reports, guidelines, Federal Register rules and regulations and reports/ records of past Clearinghouse recommendations also constitute part of the modeling guidance.

One very important aspect of this function is the development and maintenance of a historical record of regulatory decisions that involved interpretation of modeling guidance. Although most regulations, e.g., SIPs, are relatable to a strict interpretation of the "Guideline on Air Quality Models (Revised)" and related documents, there are still many situations that involve a deviation from a strict reading for either technical or broad policy reasons. For example, it might be expeditious to approve the emission rate from a small source which would result in an insignificant effect on air quality even though the recommended data bases or perhaps the recommended model were not used in the analysis. However, it is essential to document the circumstances involved with the approval so as not to set a precedent for all sources of this size; the environmental setting or other criteria may be different in future cases.

In order for the Clearinghouse to maintain technical and policy consistency in its recommendations, it is necessary that a current file of decisions involving interpretation of or deviation from modeling guidance be maintained. As noted in Appendix A, for referrals involving point sources of SO₂, TSP(PM₁₀), and Pb, records of Clearinghouse recommendations have been maintained since FY81. Also specific efforts were made to identify Regional Office practices with respect to modeling these pollutants through Clearinghouse staff visits to the Regional Offices. Records of referrals involving mobile sources of CO also exist back to FY81 but are more sparse since the Clearinghouse did not begin accepting such referrals on a routine basis until FY86. Beginning in December 1987 the Clearinghouse began maintaining files for referrals involving O₃ and NO₂.

Thus, while a long record of modeling practices exists for SO₂ and particulate matter, some effort may be necessary to establish the Regions' historical practice/precedents for regulatory modeling for CO, NO₂ and ozone. Also it may be desirable to examine Regional practices with respect to NSR/PSD issues where these issues are modeling related. To the extent that such data acquisition is necessary, one or more of the following mechanisms can be used.

1. Significant historical decisions made by OAQPS: Examination of Clearinghouse annual reports; reports and memoranda related to OAQPS assistance on ozone modeling, including EKMA modeling meetings and personal interviews with those personnel most often involved with interpretation of modeling guidance.

2. Significant Regional Office practices and precedents: Visits to Regional Offices; participation in the annual Regional/State modelers workshop; telephone interviews.

3. Other Headquarters elements that have been involved in past modeling decisions, e.g. ORD, OMS, SCSD; Telephone interviews.

In addition to gathering historical data the Clearinghouse documents all modeling issues which come to its attention. This includes the circumstances involved and the Clearinghouse recommendations. This documentation forms the basis for the periodic reporting described in Section 2.3.

2.3 Communication of Decisions

It is important that all model users be made aware of significant decisions involving the interpretations of modeling guidance. To

fulfill this function an annual report is issued to Clearinghouse users; significant decisions that have been made and the circumstances involved are itemized. The basis for this report is the case file records maintained in the Clearinghouse. The report can be used to improve consistency in future decisions and as a source of technical information.

The Clearinghouse also informs users on a timely basis of significant decisions that may affect their modeling procedures. Copies of written decisions and briefings at the annual Regional/State Modelers Workshop have worked well in the past in this regard and are expected to continue.

2.4 Identifying Needs for Additional Modeling Guidance

By the very nature of its business, the Clearinghouse is in a unique position to identify areas where gaps exist and clarification is needed in EPA's modeling guidance and also in regulatory policy related to modeling. The Clearinghouse is also a valuable resource for making recommendations and developing guidance to cover such situations because it is familiar with the circumstances involved. The Clearinghouse will continue to serve this function.

A historical example of a gap identified by the Clearinghouse was the need to provide additional guidance to the Regional Offices on how to make technically sound and consistent decisions on the use of nonguideline models. As a result, Clearinghouse personnel participated in developing the "Interim Procedures for Evaluating Air Quality Models."³

There are also several examples from the past where the Clearinghouse identified generic issues that were frequently referred to the Clearinghouse.

When such issues became apparent, the Clearinghouse participated in the development of guidance memoranda to cover the subject.

3.0 Structure of the Clearinghouse

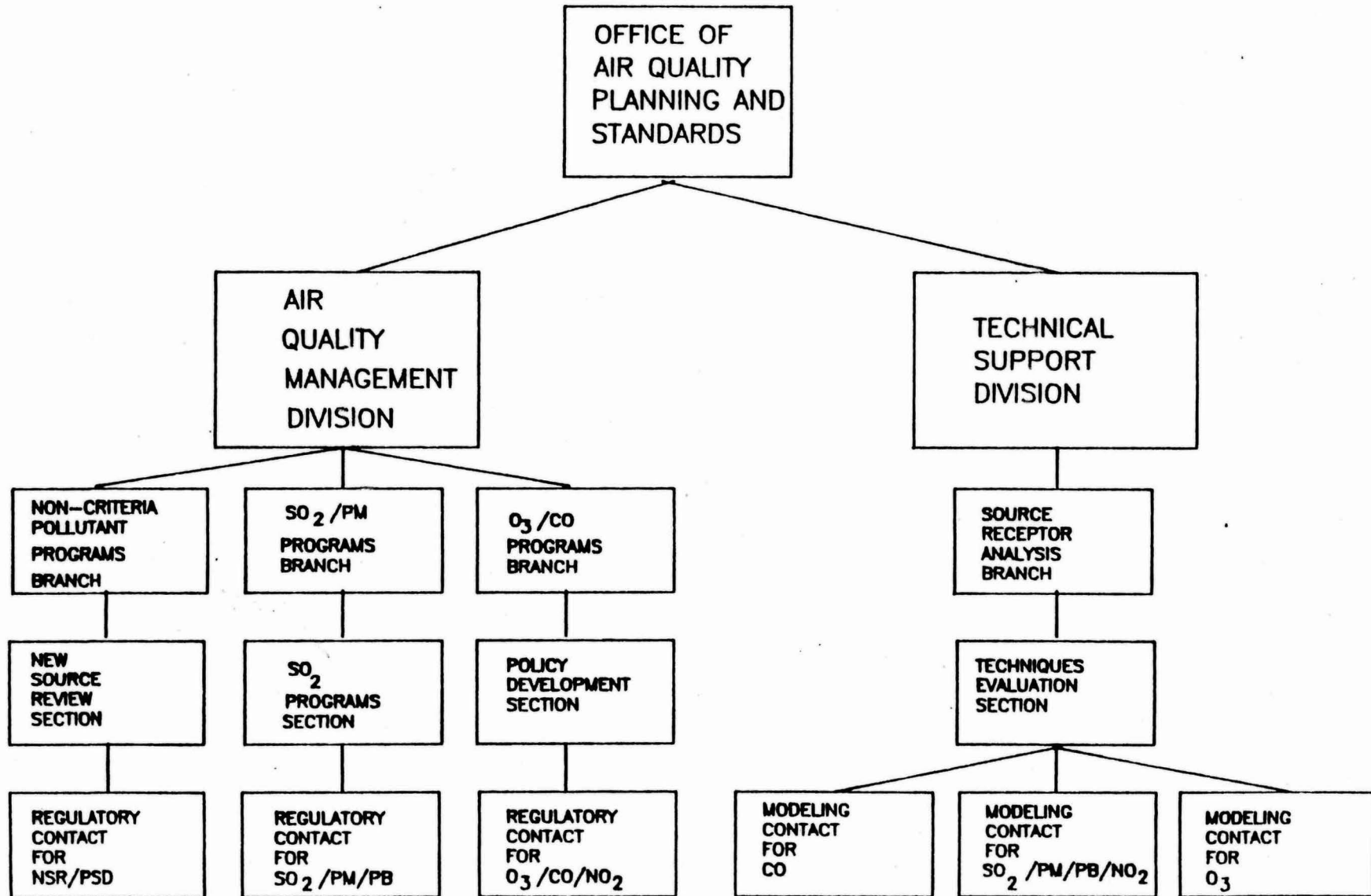
This section describes the location of the Model Clearinghouse within EPA and the personnel involved, including support staff.

The Clearinghouse is formally located in the Source Receptor Analysis Branch (SRAB), Technical Support Division (TSD), of OAQPS. As such, the Clearinghouse exists within the normal chain of command of a Branch whose primary function is to deal with regulatory and technical issues related to air quality simulation modeling. This provides ready access to modeling policy and technical expertise on modeling. It also allows for efficient hierarchy clearance concerning Clearinghouse determinations on sensitive issues. The Air Quality Management Division (AQMD) also participates in matters involving SIP attainment strategies, NSR/PSD referrals and issues and other regulatory functions.

In order to ensure that modeling issues contained in SIP submittals and related documents are reviewed for consistency in policy and for technical credibility, there are two main modes of access to the Clearinghouse. Regional Office requests for review of nonguideline model applications and other proposed deviations from modeling guidance are handled directly by Clearinghouse personnel in SRAB. SIP submittals and related documents, as well as requests from the Regions for assistance on NSR/PSD issues, are screened by Clearinghouse personnel in AQMD for adherence to modeling policy. Deviations from modeling policy are flagged for examination by Clearinghouse personnel in SRAB.

The location of Clearinghouse personnel in SRAB and in AQMD is shown in Figure 1. This organization is intended to take advantage of the cur-

FIGURE 1 Location of Personnel in the Model Clearinghouse



rent OAQPS organization and responsibilities. Each of the Clearinghouse contacts has, as part of his/her normal assignment outside of the Clearinghouse, responsibility for a specific modeling or regulatory program, e.g. NSR/PSD, SO₂, etc. Thus it is appropriate for these individuals to also include the Clearinghouse function as part of their responsibilities.

Although these personnel comprise the formal operation of the Clearinghouse and most of the work of the Clearinghouse can be done by them, it may be necessary on occasion to draw upon modeling and policy expertise throughout the Agency to assist in resolving difficult and complex issues. Thus, modeling experts in SRAB, the Office of Research and Development (ORD) and the Regional Offices may be called on from time to time to review material that is related to their particular area of expertise. However, the Clearinghouse is responsible for resolving and condensing all comments received into a single recommendation on the issue. Recommendations are concurred on by both TSD and AQMD.

The primary responsibility for managing the Clearinghouse and ensuring that all of the functions described in Section 2 are carried out is performed by a person full-time from SRAB (the Clearinghouse Coordinator). This individual is responsible for ensuring that proper communications are maintained on individual referrals, for maintaining files on the referrals and for the periodic summary reports communicating the results to all users.

Appendix B provides a list of the individuals assigned to the Clearinghouse contact positions identified in Figure 1 as well as the current Clearinghouse Coordinator. Appendix B also identifies the Regional Office

contact personnel most often involved in Clearinghouse communications. Periodically (as needed) the Regional Offices will be notified of changes in the personnel listed in Appendix B.

4.0 Clearinghouse Procedures

This section describes the procedures that the Clearinghouse follows to: (1) review modeling techniques proposed for specific applications, (2) screen regulatory packages/issues for adherence to modeling policy, and (3) document decisions and communicate results.

4.1 Advance Review of Proposed Modeling Techniques

Requests for review of modeling techniques should be sent by Regional Offices directly to:

Model Clearinghouse
Source Receptor Analysis Branch (MD-14)
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711.

The Regional Office should develop a position on the application of the technique and substantiate that position with its own thorough analysis before submission to the Clearinghouse. Also, all pertinent information relative to the technique and its application should be forwarded to the Clearinghouse.

Upon receipt of a request for review from a Regional Office, the Clearinghouse normally assigns the primary responsibility for conducting the review and preparing the response to one of the three SRAB Clearinghouse contacts shown in Figure 1, depending on the pollutant involved. If regulatory issues are involved the primary reviewer coordinates these issues with the appropriate Clearinghouse contact(s) in AQMD. The Clearinghouse Coordinator is responsible for tracking the review to ensure a timely response. If expertise outside of the Clearinghouse is needed to assist in review, the

Clearinghouse Coordinator normally arranges for such assistance.

Copies of the response to the Region, along with the incoming request, are provided to the appropriate Clearinghouse contacts in all of the Regional Offices and to the Clearinghouse Coordinator. If the issue(s) involved are of broad national significance, it may be necessary to obtain a consensus of all the Regional Offices before finalizing a response. The "Guideline on Air Quality Models (Revised)" provides the criteria for deciding when it is appropriate to refer a modeling technique to the Clearinghouse for review. This Guideline allows the Regional Administrator to approve the use of models or techniques not specifically recommended in the Guideline when he or she determines that the recommended approach is inappropriate, that another approach would be better, or that the Guideline does not recommend a specific technique. Thus, when the Regional Administrator determines that the techniques specified in the Guideline are appropriate, there is no purpose served by having the Clearinghouse review the proposed approach. Only in those cases where there is a clear deviation from modeling techniques recommended in the Guideline is it useful to obtain a technical and a consistency review from the Clearinghouse.

While the formal requests for review of proposed modeling techniques are necessary for complex and important problems, the predominant mechanism for obtaining Clearinghouse opinions on current and upcoming issues consists of direct telephone discussions to the Clearinghouse modeling contacts in SRAB. As is the case with the written requests, the Regional

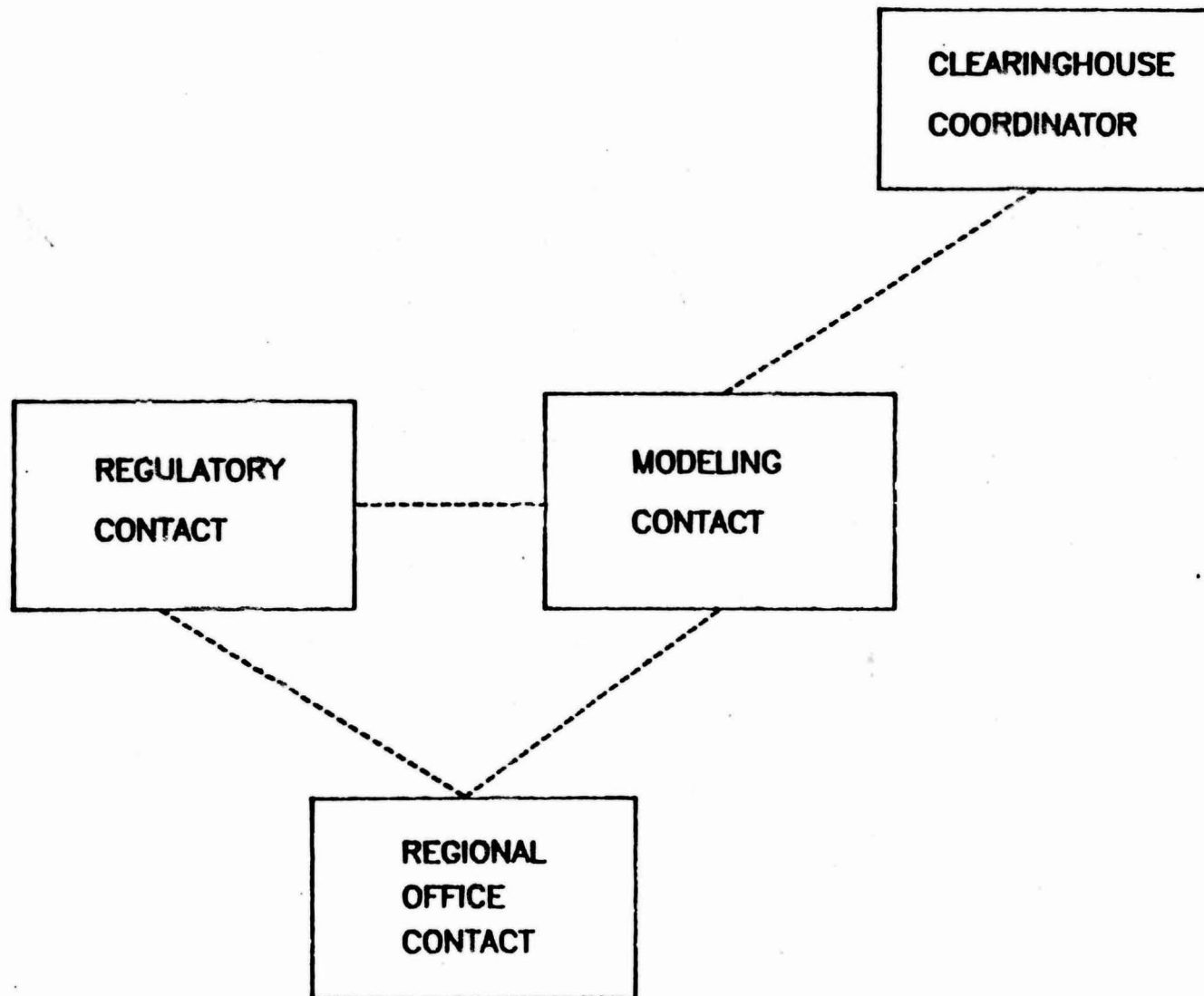
Office should have thoroughly discussed the issues internally and have a tentative position before contacting the Clearinghouse. In this way the Clearinghouse maintains its defined function of providing a second-level technical review and second-level opinion with regard to national consistency; it is not merely an extension of the Regional Office staff. Clearinghouse coordination on telephone inquiries follows the scheme illustrated in Figure 2.

For written requests the Clearinghouse makes every effort to provide a written response to the Regional Office within four weeks of receipt of the request. The primary exceptions to the four-week limit are those cases where a consensus opinion of all the Regional Offices is needed or where additional information from the Regional Office or from other EPA Offices, e.g. OGC, ORD, etc., is required to resolve the issue(s). For telephone calls the Clearinghouse normally responds within two working days if the issues can be resolved within the Clearinghouse, or five working days if Branch level review is required. Again, issues that require coordination at higher levels of management of OAQPS or review outside of OAQPS normally take longer.

4.2 Review of Regulatory Packages and Policy Issues

All Federal Register action packages (advanced opinion, proposal or final) or NSR/PSD questions on specific applications submitted to OAQPS are screened by Clearinghouse contacts in AQMD (See Figure 1) for consistency with current modeling guidance. If significant deviations from guidance are identified, these issues are then discussed within the Clearinghouse via the coordination mechanism in Figure 2. (Where there are significant

FIGURE 2 Coordination Procedure for Model Clearinghouse Referrals



deviations from guidance, the Regional Office should have presented a position, with appropriate justification, in the Federal Register package supporting either approval or disapproval.) In all cases final resolution of the regulatory action rests with AQMD, with input from SRAB. The Clearinghouse then, if at all possible, reaches a decision on the acceptability of the approach being utilized in the regulatory action within the normal review period for SIP processing. If particularly complex issues are involved which require coordination with personnel outside the Clearinghouse, an extension to the regular review period may be requested as provided for in the "Guidance on Processing SIP Revisions (and 111d plans)"⁴. All significant decisions involving modeling in regulatory packages are included in the Modeling Clearinghouse files and in the annual reports.

4.3 Documentation and Communication of Results

All communications on modeling issues brought to the attention of the Clearinghouse are documented and kept on file by the Clearinghouse Coordinator. Meetings and telephone conversations are summarized on a "Record of Communication" form and filed according to the specific SIP action or model proposal. Official memoranda, technical information and other pertinent material are included in the file.

The files are reviewed at least twice per year for information that would be of benefit to all users. At the annual Regional/State Modelers Workshop, held in the Spring of the year, the Clearinghouse

presents an oral summary of significant Clearinghouse referrals that have occurred since the beginning of the fiscal year. At the end of each fiscal year, the Clearinghouse writes a summary report to users covering all referrals that have occurred during the year. Similar to the summary reports that were written for FY81 through FY87, these reports will: (1) summarize in a statistical fashion the nature of the year's referrals; (2) summarize in "text" form the several most significant and involved referrals; (3) summarize generic issues that occurred or reoccurred during the year; and (4) provide, in capsule form, a list of all significant referrals to the Clearinghouse during the year.

In addition to the summary reports the Clearinghouse, as mentioned earlier, sends copies of its written responses (along with incoming requests) to all the Regional Offices. In this way the Regional Offices are made aware, in a timely fashion, of decisions that may affect their modeling activities. Also, as mentioned earlier, the Model Clearinghouse seeks an advance opinion of the Regions on particularly sensitive issues with national implications.

Finally, as needed, the Clearinghouse continues to provide other communications/services that have been useful in the past. These include: (1) periodic visits to Regional Offices to exchange information and maintain the rapport of the Clearinghouse; (2) periodic reports and information sheets on the Clearinghouse and its activities for the public; and (3) identification of areas where modeling guidance is lacking or ambiguous and make recommendations for correcting these problems.

5.0 References

1. Environmental Protection Agency, "Guideline on Air Quality Models (Revised)," EPA-450/2-78-027R, Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C., July 1986.
2. U.S. Congress. "Clean Air Act Amendments of 1977." Public Law 95-95, Government Printing Office, Washington, D.C., August 1977.
3. EPA, "Interim Procedures for Evaluating Air Quality Models (Revised)", EPA-450/4-84-023, Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C., September 1984.
4. EPA, "Guidance on Processing SIP Revisions (and 111d plans)," Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C., September 1987.

Appendix A

History of the Model Clearinghouse

This Appendix provides a brief review of the operations of the EPA Model Clearinghouse from 1980-1988.

Original Organization and Operating Plan

The Model Clearinghouse was established on November 20, 1980.¹ The Regional Offices were notified of its general purposes, procedures and limitations on that date. A detailed operational plan² describing the functions, structure, procedures and schedule for implementation was issued on February 25, 1981.

The Clearinghouse formally operated in the Source Receptor Analysis Branch (SRAB) of the OAQPS. Regional Office requests for review of non-guideline models were sent directly to SRAB. However, prior to December 1987 the Control Programs Operations Branch (CPOB) also maintained responsibility for review/approval of Federal Register packages submitted from the Regions. These packages often contained modeling issues; as such, these issues were considered by the Clearinghouse. For each Branch an individual was assigned to the Model Clearinghouse. Close coordination was maintained between the two Branches on all Regional Office modeling issues that came to their attention.

Initially the operation of the Model Clearinghouse was limited to the review of proposed deviations from modeling guidance for the regulatory modeling of iron/steel facilities, smelters and power plants. As such the reviews were usually limited to SO₂, TSP and Pb. On a gradual basis the limitation to these facilities was relaxed to the point where the Clearinghouse, by the mid 1980's, was accepting referrals for all point sources of stable pollutants.

Beginning in 1986 the Clearinghouse began accepting referrals for mobile source problems involving CO. Individuals in SRAB and CPOB were identified to facilitate the review of referrals for this class of problems. Finally, at the end of 1987 the Clearinghouse expanded to cover O₃ and NO₂.

Review of Proposed Regulatory Actions

The primary purpose of the Model Clearinghouse was to review the proposed applications of air quality simulation models to specific regulatory situations. Such applications were "referred" to the Model Clearinghouse in one of two ways. In the first way a Regional Office may have believed that it was appropriate to approve a regulatory action involving a deviation from modeling guidance. However, before doing so the Regional Office wanted to obtain a second opinion on whether the proposed modeling technique was technically sound and consistent with similar applications in other Regions. The issue was then referred to the Model Clearinghouse, usually to SRAB, for this second opinion.

The other mode of operation of the Clearinghouse involved the review of Federal Register packages being forwarded for concurrence prior to publication. These packages were reviewed by the Clearinghouse contact person in CPOB for adherence to modeling guidance. When deviations from guidance were identified, they were discussed with the SRAB Clearinghouse contact person and a determination of technical adequacy and consistency were made. Oftentimes the Regions would forward drafts of Federal Register packages to CPOB for a preliminary review; as such the identification/review of modeling issues was similar to the "advanced opinion" referral described above.

Development and Maintenance of Records

In order for the Clearinghouse to make reasoned decisions on consistency, it was necessary to build and maintain a set of records on past decisions involving deviations from modeling guidance. It was determined that the best way to build an "initial" set of records was to visit each of the Regional Offices and discuss with them deviations from guidance that had occurred prior to formation of the Clearinghouse. The stated purposes of these visits, conducted by both CPOB and SRAB Clearinghouse personnel, were: (1) to gather information on the historical usage of models by Regional Offices; (2) to identify current/upcoming modeling problems which may come to the attention of the Clearinghouse; and 3) to communicate information to the Regions on the current and future operation of the Clearinghouse. A first set of visits which took place in 1981-82 accomplished these purposes. A second set of visits in 1986-87 updated information on these purposes and also served to orient new personnel in the Clearinghouse and in the Regional Offices to the Clearinghouse operation.

In order to document recommendations and decisions by the Model Clearinghouse, records on each referral were created. Each record contained telecons (for oral discussions) and/or memoranda containing Clearinghouse recommendations and/or pertinent written background material (technical reports, Federal Register notices, etc). A set of files of these records were maintained in SRAB.

Communication of Information

Several activities took place to serve the purpose of communicating the Clearinghouse experience with use of nonguideline models and other deviations from modeling guidance. First, to serve the "newsletter"

function identified in the original operations plan, at the end of each fiscal year a Clearinghouse Summary Report was prepared and distributed to all users. This report served to inform the users about the issues and responses in which the Clearinghouse was involved during the year.

In a more informal communication, significant issues/responses were usually discussed at the Regional/State modelers Workshop held in the Spring of each year.

While these activities served to inform users of pertinent issues on a periodic basis, it was pointed out to the Clearinghouse in 1982, that there was a need to more promptly inform Regional Offices of important contemporary decisions. Thus in FY83 the Clearinghouse initiated a policy of sending copies of its written responses, along with the incoming requests, to all the Regional Offices. In this way the Regional Offices were made aware, in a timely fashion, of decisions that may affect their modeling activities.

While the above communications served to inform Agency users of the activities of the Clearinghouse, there was no mechanism to inform the general public. To serve this identified need, a five-year summary report, primarily summarizing the number and general nature of Clearinghouse referrals, was prepared in May 1986.³

Table 1 summarizes the number and nature of contacts from the Regional Offices to the Clearinghouse from FY81 to FY87. Note from the table that during the seven-year period there were a total of 103 modeling issues referred to the Clearinghouse which required a written response and 394 issues which were resolved orally. In addition, CPOB directly reviewed

more than 724 regulatory action packages which contained modeling analyses that followed guidance and required no further technical review by SRAB. Although there is some variation from year to year, on average the Model Clearinghouse handled 100 cases per year.

Table 1. Clearinghouse Responses by Year

	FY81	FY82	FY83	FY84	FY85	FY86	FY87	Total
Written Responses(1)	12	12	19	11	11	19	19	103
Telephone/Oral Responses(1)	18	24	46	82	71	73	80	394
<u>Federal Register</u> Actions(2)	65	43	71	26	12	7	*(3)	224(3)
Total	95	79	136	119	94	99	99	721

(1) Cases containing modeling issues requiring a technical review and coordination between CPOB and SRAB.

(2) Cases that followed current guidance; reviewed directly by CPOB.

(3) Beginning in FY87 Federal Register reviews were included in Telephone/Oral Responses.

References

1. EPA, "Model Clearinghouse: Operational Plan," Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C., February 1981.
2. EPA, "Model Clearinghouse," Memorandum to Regions I-X and to Division of Stationary Enforcement, Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C., November 20, 1980.
3. EPA, "Activities of the EPA Model Clearinghouse, A Summary Report: FY81-FY85," EPA-450/4-86-006, Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C., May 1986.

Appendix B

MODEL CLEARINGHOUSE PERSONNEL

5/1/88

OAQPS CONTACTS

<u>Division</u>	<u>Branch</u>	<u>Name</u>	<u>FTS Number</u>	<u>Responsibility</u>
TSD	SRAB	Dean Wilson	629-5683	Clearinghouse Coordinator
TSD	SRAB	Dean Wilson	629-5683	SO ₂ , PM, Pb, NO ₂ Modeling
	SRAB	Keith Baugues	629-5366	O ₃ Modeling
	SRAB	Tom Braverman	629-5383	CO Modeling
AQMD	SDPMPB	Sharon Reinders	629-5255	SO ₂ , PM, Pb SIPs
	OCPB	Ray Vogel	629-5284	CO, O ₃ , NO ₂ SIPs
	NCPB	Dan deRoeck	629-5593	PSD/NSR for all criteria pollutants

REGIONAL MODELING CONTACTS

<u>Region</u>	<u>Regional Contact</u>	<u>FTS Telephone No.</u>
I	Susan Kulstad	835-3226
II	Ray Werner	264-2517
III	Al Cimorelli	597-6563
IV	Lew Nagler	257-2864
V	Mike Koerber	886-6061
VI	Jim Yarbrough	255-7214
VII	Richard Daye	757-2896
VIII	John Notar	564-1755
IX	John Vimont	454-7640
X	Rob Wilson	399-1531

CO CONTACTS

<u>Region</u>	<u>Regional Contact</u>	<u>FTS Telephone No.</u>
I	Tom Wholley	835-3233
II	Steve Sambol	264-2517
III	Alan Cimorelli	597-6563
IV	Tom Hansen	257-2864
V	Ed Doty	886-6057
VI	Jim Yarbrough	255-7214
VII	Larry Hacker	757-2893
VIII	John Notar	564-1755
IX	John Vimont	454-8223
X	Rob Wilson	399-1531

EKMA CONTACTS

<u>Region</u>	<u>Regional Contact</u>	<u>FTS Telephone No.</u>
I	Richard Burkhart	835-3223
II	Rudy Kapichak	264-2517
III	Larry Budney	597-0545
IV	Tom Lyttle	257-2864
V	Ed Doty	886-6057
VI	Jim Yarbrough	255-7214
VII	Larry Hacker	757-2893
VIII	John Notar	564-1755
IX	John Vimont	454-7640
X	Rob Wilson/Dave Bray	399-1531

RECEPTOR MODEL CONTACTS

<u>Region</u>	<u>Regional Contact</u>	<u>FTS Telephone No.</u>
I	Susan Kulstad	835-3226
II	Rudy Kapichak	264-1446
III	Denis Lohman	597-8375
IV	Lew Nagler	257-2864
V	Mike Koerber	886-6061
VI	Jim Yarbrough	225-7214
VII	Richard Daye	757-2893
VIII	John Notar	564-1755
IX	Alison Bird	454-7659
X	Dave Bray	399-4253

APPENDIX C
EPA Model Clearinghouse
Summary

The Model Clearinghouse is the single EPA focal point for reviewing the use of modeling techniques for criteria pollutants in specific regulatory applications. The Clearinghouse also serves to compile and periodically report for Regional Office benefit Agency decisions concerning deviations from the requirements of the "Guideline on Air Quality Models (Revised)."

Need for the Model Clearinghouse

The Guideline states that when a recommended model or data base is not used, the Regional Administrator may approve the use of other techniques that are demonstrated to be more appropriate. However, there is also a need to provide for a mechanism that promotes fairness and consistency in modeling decisions among the various Regional Offices and the States. The Model Clearinghouse promotes this fairness and uniformity and also serves as a focal point for technical review of "nonguideline" techniques proposed for use/approval by a Regional Administrator.

Functions of the Model Clearinghouse

The major function of the Clearinghouse is to review specific proposed actions which involve interpretation of modeling guidance, deviations from strict interpretation of such guidance and the use of options in the guidance, e.g., Regional Office acceptance of nonguideline models and data bases. This is handled in two ways: (1) the Clearinghouse, on request from the Regional Office, will review the Region's position on proposed (specific case) use of a nonguideline model for technical soundness and national consistency, and (2) the Clearinghouse will screen Federal Register regulatory packages for adherence to modeling policy and make recommendations for resolution of any issues identified.

A secondary function of the Model Clearinghouse is to communicate to regulatory model users in EPA significant decisions involving the interpretation of modeling guidance. This is accomplished through an annual "Clearinghouse Report" which itemizes the significant decisions that have been made and the circumstances involved. This report serves to improve consistency in future decisions and as a source of technical information for the Regional Offices. In addition to the annual report the Clearinghouse informs users on a contemporary basis of significant decisions through copies of written decisions and briefings at various meetings and workshops.

Structure of the Clearinghouse

The Clearinghouse is formally located in the Source Receptor Analysis Branch (SRAB) of OAQPS. However, the Air Quality Management Division (AQMD) also participates in Clearinghouse matters involving SIP attainment strategies and other regulatory functions.

The primary responsibility for managing the Clearinghouse and ensuring that all of its functions are carried out is performed by a person full-time within SRAB. The responsibility for responding to requests for review of modeling issues is assigned, on a pollutant/program basis to three SRAB individuals. In addition, AQMD supports the Clearinghouse with staff who are also knowledgeable in modeling policy. These individuals are responsible for screening SIP submittals and related documents, referring modeling issues to SRAB through the Clearinghouse and documenting the final (and any significant interim) decision on disposition of the issues.

Communication Chain

The Model Clearinghouse functions within the organizational structure of EPA. As such the Clearinghouse serves the EPA Regional Offices. It coordinates with and communicates decisions to the Regional Offices. Any coordination with State and local agencies and individual sources on Clearinghouse activities is a function of the EPA Regional Offices.