CHEMICAL MANUFACTURERS ASSOCIATION

June 2, 1992

Dear Vinyl Chloride Research Coordinator Members:

The following items are enclosed to aid you in your discussion at the June 5, 1992 conference call:

1) Agenda for the conference call;

2) Publication entitled, "An Industry-Wide Epidemiologic Study of Vinyl Chloride Workers, 1942-1982" by Otto Wong et al;

3) A October 21, 1991 letter to Roy Gottesman from R. Hinderer expressing concerns on the Wong et al publication;

4) A November 8, 1991 letter to Roy Gottesman from J. Drumwright expressing concerns on the Wong et al publication;

5) Publication entitled, "Critical Review of Cancer Epidemiology in Petroleum Industry Employees, With a Quantitative Meta-Analysis by Cancer Site,";

6) A copy of the CMA Guidelines for Good Epidemiology Practices for Occupational and Environmental Epidemiologic Research;

7) Selected pages from the October 1991 ATSDR Draft Update of the Toxicological Profile for Vinyl Chloride;

8) A copy of the ATSDR Procedure for Conducting Voluntary Research; and,

9) March 4, 1992, EPA RM 1 Meeting Summary for Screening Level Testing of TRI Chemicals.

CMA will initiate the call at 1:00 p.m. EDT. Dr. Otto Wong will be included on the call at 1:45 p.m. EDT. Items 2,3, and 4 probably were sent to you earlier; however, they are included again for your ready reference. Discussion of Dr. Wong's publication on vinyl chloride will be the major topic of discussion on June 5. Dr. Wong has sent me his publication entitled, "Critical Review of Cancer Epidemiology in Petroleum Industry Employees," (Item 5) to see if the CMA Vinyl Chloride Panel may want to publish a similar article.

Item 6 is enclosed for your information only.

Item 7 is selected pages from the October, 1991 Draft Toxicological Profile Update for Vinyl Chloride. The comment period on the draft profile was extended to March 2, 1992. Vinyl chloride is

R&S150035

2501 M Street NW Washington DC 20037 202-887-1100 Panafax 202-887-1237 Telex 89617 (CMA WSH)

number 4 on a list of 38 high priority chemicals identified by ATSDR for filling data gaps. The identified data gaps for vinyl chloride are included in the enclosed selected pages. ATSDR plans to publish revised data gaps for vinyl chloride in June, 1992, based on comments received.

Item 8 is the procedure for conducting a voluntary research program under ATSDR and is being sent to you for your information.

Item 9 is EPA's intention to list vinyl chloride on its high production/release chemical list and identifies several data gaps for vinyl chloride. My cursory review of the data gaps identified by Clemment Associates in the support document attached to the EPA document indicates that these data gaps are incorrect. The Panel members may want to work with EPA now so that the new document reflects correct data gaps or may want to wait until EPA publishes the new document.

We will discuss above items on our conference call on June 5. If there is sufficient interest on the part of the Vinyl Chloride Research Coordinators to pursue the above items further, we may consider a meeting in Washington, D.C., to discuss the industry's plan of action in more detail.

I am looking forward to speaking with you on June 5. If you have any questions concerning the call, please call me at (202) 887-1192.

Sincerely,

Has Shah

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosures

pursuant to the applicable tariff, notwithstanding demand for payment.

This proceeding has been assigned to Administrative Law Judge Charles E. Morgan ("Presiding Officer"). Hearing in this matter, if any is held, shall commence within the time limitations prescribed in 46 CFR 502.61. The hearing shall include oral testimony and cross-examination in the discretion of the Presiding Officer only upon proper showing that there are genuine issues of material fact that cannot be resolved on the basis of sworn statements, affidavits, depositions, or other documents or that the nature of the matter in issue is such that an oral hearing and cross-examination are necessary for the development of an adequate record. Pursuant to the further terms of 46 CFR 502.61, the initial decision of the Presiding Officer in this proceeding shall be issued by February 3, 1993, and the final decision of the Commission shall be issued by June 3, 1993.

Joseph C. Polking,

Secretary.

[FR Doc. 92-2966 Filed 2-6-92; 8:45 am]

BILLING CODE 6730-01-M

FEDERAL RESERVE SYSTEM

Carlos Salman, et al.; Change in Bank Control Notice; Acquisition of Shares of Banks or Bank Holding Companies

The notificant listed below has applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire a bank or bank holding company. The factors that are considered in acting on notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notice is available for immediate inspection at the Federal Reserve Bank indicated. Once the notice has been accepted for processing, it will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for the notice or to the offices of the Board of Governors. Comments must be received not later than March 3, 1992.

A. Federal Reserve Bank of Atlanta (Robert E. Heck, Vice President) 104 Marietta Street, NW., Atlanta, Georgia 30303:

1. Carlos Salman, Miami, Florida; to acquire an additional 11.30 percent of the voting shares of Terrabank Holding Corporation, Miami, Florida, for a total of 20.57 percent, and thereby indirectly acquire Terrabank, N.A., Miami, Florida.

Board of Governors of the Federal Reserve System, February 3, 1992.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 92-2986 Filed 2-6-92; 8:45 am]

BILLING CODE 6210-01-F

U.S.B. Holding Co., Inc., et al.; Formations of; Acquisitions by; and Mergers of Bank Holding Companies

The companies listed in this notice have applied for the Board's approval under section 3 of the Bank Holding Company Act (12 U.S.C. 1842) and § 225.14 of the Board's Regulation Y (12 CFR 225.14) to become a bank holding company or to acquire a bank or bank holding company. The factors that are considered in acting on the applications are set forth in section 3(c) of the Act (12 U.S.C. 1842(c)).

Each application is available for immediate inspection at the Federal Reserve Bank indicated. Once the application has been accepted for processing, it will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank or to the offices of the Board of Governors. Any comment on an application that requests a hearing must include a statement of why a written presentation would not suffice in lieu of a hearing, identifying specifically any questions of fact that are in dispute and summarizing the evidence that would be presented at a hearing.

Unless otherwise noted, comments regarding each of these applications must be received not later than March 3, 1992.

A. Federal Reserve Bank of New York (William L. Rutledge, Vice President) 33 Liberty Street, New York, New York 10045:

1. U.S.B. Holding Company, Inc., Nanuet, New York; to acquire 26 percent of the voting shares of New Milford Bank and Trust Company, Inc., New Milford, Connecticut.

B. Federal Reserve Bank of Richmond (Lloyd W. Bostian, Jr., Senior Vice President) 701 East Byrd Street, Richmond, Virginia 23261:

1. F & M National Corporation, Winchester, Virginia; to acquire 100 percent of the voting shares of Farmers & Merchants Bank of Keyser, Keyser, West Virginia.

C. Federal Reserve Bank of Atlanta (Robert E. Heck, Vice President) 104 Marietta Street, N.W., Atlanta, Georgia 30303:

1. Villages Bancorporation, Inc., Lady Lake, Florida; to become a bank holding company by acquiring 100 percent of the voting shares of First Bank of the Villages, Lady Lake, Florida.

D. Federal Reserve Bank of Chicago (David S. Epstein, Vice President) 230 South LaSalle Street, Chicago, Illinois 60690:

1. Fairmount Banking Company, Fairmount, Indiana; to become a bank holding company by acquiring 100 percent of the voting shares of The Fairmount State Bank, Fairmount, Indiana.

Board of Governors of the Federal Reserve System, February 3, 1992.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 92-2987 Filed 2-6-92; 8:45 am]

BILLING CODE 6210-01-F

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Agency for Toxic Substances and Disease Registry

[ATSDR-47]

Procedure for Conducting Voluntary Research

AGENCY: Agency for Toxic Substances and Disease Registry (ATSDR), Public Health Service (PHS), Department of Health and Human Services (HHS).

ACTION: Notice.

SUMMARY: This notice announces the procedure for volunteering to conduct research as part of the ATSDR Substance-Specific Applied Research Program authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. The voluntary research will be conducted by the private sector to fill priority data needs for hazardous substances that are the subjects of the ATSDR Toxicological Profiles. To date, the priority data needs for 38 hazardous substances have been identified and announced by ATSDR in the **Federal Register** (56 FR 52178) on October 17, 1991. As part of this procedure for conducting voluntary research, the Agency has developed a model agreement, Memorandum of Understanding (MOU), that will be signed by ATSDR and the interested private sector organization(s) (hereinafter referred to as the Company, although multiple companies or a consortium may be signatories to a single MOU) prior to the initiation of the voluntary research. The public is invited to comment on this procedure for conducting voluntary research, and the model MOU.

DATES: The ATSDR considers this voluntary research effort to be of significant importance to the continuing development of the Substance-Specific Applied Research Program. Therefore, public comments concerning this Federal Register notice will be accepted throughout the Agency's involvement with voluntary research.

ADDRESSES: Comments on this notice should bear the docket control number ATSDR-47 and should be submitted to the Division of Toxicology, Research Implementation Branch, Agency for Toxic Substances and Disease Registry, Mailstop E-29, 1600 Clifton Road NE., Atlanta, Georgia 30333. Requests for a copy of the model Memorandum of Understanding should be addressed similarly.

Comments on this notice will be available for public inspection at the Agency for Toxic Substances and Disease Registry, Building 33, Executive Park Drive, Atlanta, Georgia (not a mailing address), from 8 a.m. until 4:30 p.m., Monday through Friday, except for legal holidays.

FOR FURTHER INFORMATION CONTACT: The Division of Toxicology, Research Implementation Branch, Agency for Toxic Substances and Disease Registry, Mailstop E-29, 1600 Clifton Road NE., Atlanta, Georgia 30333. Telephone: 404-639-6015 or FTS 236-6015.

SUPPLEMENTARY INFORMATION:

Background

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9604(i)), as amended by the Superfund Amendments and Reauthorization Act (SARA) (Pub. L. 99-499), requires that ATSDR: (1) Develop jointly with the Environmental Protection Agency (EPA) a list of hazardous substances found at National Priorities List (NPL) sites, (in order of priority), (2) prepare Toxicological Profiles of these substances, and (3) assure the initiation of a research program to fill identified data needs associated with the substances.

The identification of the priority data needs for 38 priority hazardous substances was described in the Federal Register (October 17, 1991, 56 FR 52178), public comments were invited, and Companies were invited to volunteer to conduct research to fill specific priority data needs during the public comment period for that notice. Future Federal Register notices will announce (1) the final list of priority data needs for the 38 hazardous substances after public comments on these priority data needs have been addressed, (2) a second call for voluntarism to conduct research to fill priority data needs, and (3) the names of Companies that have volunteered to fill specific priority data needs.

The major purpose of this ATSDR Applied Research Program is to supplement the substance-specific informational needs of the public and scientific community; and to supply necessary information for conducting comprehensive public health assessments for populations living in the vicinity of hazardous waste sites. This program will also provide data that can be generalized to other substances or areas of science, including risk assessments of chemicals, thus creating a scientific base for filling a broader range of data needs.

Procedure for Conducting Voluntary Research

CERCLA, as amended in section 104(i)(5)(D), states that it is the sense of Congress that the costs for conducting this research program be borne by the manufacturers and processors of the hazardous substances under the Toxic Substances Control Act (TSCA) and registrants under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), or by cost recovery from responsible parties under CERCLA. To effectuate this statutory intent, the ATSDR has developed a plan whereby portions of this CERCLA Substance-Specific Applied Research Program will be conducted via regulatory mechanisms (TSCA/FIFRA), private sector voluntarism, and through the direct use of CERCLA funds.

ATSDR intends to enter into voluntary research projects in ways that lead only to high quality scientific work. This necessitates peer review of study protocols and results consistent with CERCLA section 104(i)(13). CERCLA requires the peer review panel to consist of three to seven peer reviewers who (a) are selected by the Administrator of ATSDR, (b) are disinterested scientific experts, (c) have a reputation for scientific objectivity, and (d) who lack institutional ties with any person involved in the conduct of the study or research under review.

The ATSDR is aware of concerns within some segments of the public regarding voluntary research conducted by Companies with vested interests in the research. To this end, the Agency encourages the public to comment on ATSDR's procedure for conducting voluntary research in this notice. Additionally, for each research project conducted voluntarily, the MOU (signed by ATSDR and the interested Company), the ATSDR approved study plan, peer reviewers' comments, and the final research report will be available for public inspection at the location and times indicated in the **ADDRESSES** section of this notice.

The ATSDR encourages Companies to volunteer to conduct research on priority data needs that were announced in the Federal Register notice "Identification of Priority Data Needs for 38 Priority Hazardous Substances" (October 17, 1991, 56 FR 52178) and on priority data needs to be subsequently announced by the Agency. Interested Companies are asked to submit concept proposals (1-2 pages, not detailed protocols) during the October 17, 1991-January 15, 1992 public comment period for the above-mentioned notice, and for subsequent Federal Register notices. The concept proposal should include (1) the name of the interested Company, (2) the specific priority data need(s) to be filled, (3) a summary of the Company's experience in conducting research similar to that in the concept proposal, and (4) a statement about the laboratory and other resource capabilities for conducting the proposed research. Interested Companies may submit concept proposals that address substance-specific data needs or, where appropriate, concept proposals for research that will provide information relevant to classes of chemical substances or which may be generalized to other areas of science.

A tri-agency review committee comprised of scientists from ATSDR, the National Toxicology Program (NTP), and the EPA will review these concept proposals. The committee, chaired by the Director of the Division of Toxicology, ATSDR, is charged with coordinating and assuring the appropriate evaluation of research conducted to fill priority data needs of ATSDR's priority hazardous substances relevant to the objectives of CERCLA, as amended. The principal responsibilities of the committee are to (1) provide a forum to discuss substance-specific research activities being carried out via TSCA/FIFRA, private sector voluntarism, or CERCLA funds, (2) coordinate knowledge of research activities to avoid duplication of research being conducted in other programs and under other authorities, and (3) maintain a scheduled forum that provides an overall review of the ATSDR Superfund Applied Research Program. Based on the review committee's recommendations, ATSDR will determine which, and how, specific voluntary research projects will be pursued with volunteering Companies. In instances where volunteered research initiatives are considered by the tri-

agency committee to be more appropriate for EPA response. EPA may negotiate directly with the interested Company.

If ATSDR decides to pursue a specific voluntary research project submitted in a concept proposal by a Company, the Agency will enter into a MOU with the interested Company, or where appropriate, a single MOU will be entered into with multiple Companies. ATSDR recognizes that two or more companies or a consortium of interested firms may elect to enter into collaborative efforts in pursuing one or more concept proposals. Following the signing of the MOU and prior to the initiation of the research, the interested Company will negotiate with ATSDR to agree upon an approved study plan including testing protocols. The content of the MOU is described below.

(1) Identification of the party or parties comprising the Company which enters into the MOU—this section consists of the name and address of each party responsible for the conduct of the research.

(2) Identification of the substance(s) subject to research requirements under the MOU—this section consists of the name and Chemical Abstract Service (CAS) Number of the chemical substance(s) that is the subject of the MOU. The chemical substance(s) to be tested shall be as pure as reasonably can be attained. Alternate language will be substituted when the subject of the research is a human population, as in epidemiologic studies.

(3) Identification of the effects or characteristics for which research is to be conducted—in this section, the health effects, environmental fate or other characteristics for which research is to be conducted under the MOU shall be listed.

(4) Schedule for submission of study plans, initiation of research and submission of interim and final reports—the Company shall submit to ATSDR a study plan for each test six weeks after signing the MOU. The study plan shall include test protocols and a schedule with reasonable timetable and deadlines for initiation and completion of each test and submission of interim and final reports. The test protocols will be reviewed by an ATSDR-appointed peer review panel. If ATSDR disapproves the study plan, it will inform the Company of the deficiencies of the plan. The Company may request reconsideration of the study plan, resubmit a modified study plan, or elect to terminate the MOU with no further obligation of either party under the MOU. In the event that the Company resubmits a modified study plan and ATSDR disapproves it, the Agency may elect to terminate the MOU.

The starting date of the research project may be negotiated depending on the type of research being conducted. However, as a general guideline, the research effort shall be initiated within eight weeks of the approval of the study plan and attendant test protocols. Written notification of the starting date of the test will be submitted to ATSDR by the Company. The completion date of the study will be established from the approved study plan. Interim progress reports shall be submitted to ATSDR within six months after the initiation of testing and thereafter within six months after submission of each previous interim report. The final report on the results of testing shall be submitted to ATSDR no more than 20 weeks following the end of the study. ATSDR acceptance of the final report will be contingent upon approval by ATSDR following the peer reviewers' recommendations, consistent with CERCLA section 104(i)(13) peer review requirements. All results of research conducted pursuant to the MOU and all supporting data associated with the research report will be provided to ATSDR and made available by the Agency to the public as part of its implementation of sections 104(i) (3) and (5) of CERCLA. Final reports will not be accepted if the data is designated Confidential Business Information (CBI) or otherwise restricted from public disclosure.

(5) Modifications of study plans, guidelines, and schedules—if a Company intends to modify a study plan, protocol, or schedule that was approved by ATSDR, it must notify ATSDR in writing of the proposed modifications and reasons therefor. If ATSDR approves of the modifications, the time schedule established for completion of the tests shall be re-negotiated and appended to the existing MOU. If ATSDR disapproves the Company's request and the Company does not accept ATSDR's decision to disapprove the modified study plan, the Company may terminate the MOU.

(6) Observance of Good Laboratory Practices—all research agreed to in the MOU shall be conducted in accordance with the Good Laboratory Practice (GLP) standards codified in 40 CFR 792, to the extent that such GLP standards apply. Should the Company's Good Epidemiology Practices be relevant to a research project, those Practices should be affixed to the study protocol.

(7) Inspections—the Company shall ensure that an authorized employee of ATSDR is permitted, at reasonable times and in a reasonable manner, to (i) inspect any research or testing facility that is conducting research pursuant to the MOU, and (ii) inspect (and in the case of records, copy) any records and specimens required to be maintained in connection with research performed pursuant to the MOU.

(8) Submission and publication of data—all data and reports submitted to ATSDR pursuant to the MOU shall be sent to ATSDR, in duplicate, at the address indicated in the ADDRESSES section. Acceptance of the final report is contingent upon approval by ATSDR following the peer reviewers' recommendations, consistent with CERCLA peer review requirements. The Company maintains all rights to publication of data and results, however all results of research conducted pursuant to the MOU and all supporting data associated with the final research report will be provided to ATSDR and made available by the Agency to the public as part of its implementation of Section 104(i)(5) of CERCLA. The final report will not be accepted by ATSDR if the data is designated Confidential Business Information (CBI) or is otherwise restricted from public disclosure.

(9) Payments of costs and expenses—each company shall agree to pay all costs, direct and indirect, associated with the research programs and which are not considered part of ATSDR's administrative costs.

(10) Events constituting a breach of the MOU—Failure by the Company to:

(a) Submit a study plan that receives ATSDR's approval following the peer reviewers, recommendations;

(b) Initiate any test agreed to in the MOU by the date established pursuant to the MOU;

(c) Adhere to GLP standards, established test procedures or accepted practices of good science to the extent that these standards and practices apply;

(d) Submit any interim report required under the MOU by the date established pursuant to the MOU; or

(e) Submit any final report that receives ATSDR's approval following peer review conducted by the Agency, shall constitute a breach of the MOU. In the event of a breach, ATSDR will not impose any claim to damages, but at the Agency's discretion may terminate the MOU.

(11) Termination—since the MOU is entered into voluntarily by ATSDR and the Company, termination by ATSDR is not considered reviewable agency action pursuant to the Administrative Procedure Act or any other applicable Federal law, and there will be no appeal

process beyond that set out in the MOU. The Company may elect to terminate the MOU at any time.

(12) Statutory compliance—consistent with section 104(i)(12) of CERCLA, as amended (42 U.S.C. 9612), nothing in the MOU shall be construed to delay or otherwise affect or impair the authority of the President, the Administrator of ATSDR or the Administrator of EPA to exercise any of their authority under any other provision of law, including TSCA and FIFRA, or the response and abatement authorities of CERCLA.

The results of the research conducted via this ATSDR Substance-Specific Applied Research Program will be used for public health assessment purposes and to reassess ATSDR's substance-specific priority data needs. It is the intention of the Agency, at this time, to re-evaluate the priority data needs for the listed hazardous substances every three years.

Dated: February 3, 1992.

Walter R. Dowdle,

Acting Administrator, Agency for Toxic Substances and Disease Registry.

[FR Doc. 92-2978 Filed 2-6-92; 8:45 am]

BILLING CODE 4160-70-M

Alcohol, Drug Abuse, and Mental Health Administration

Suspension Lifted; Laboratory Again Meets Minimum Standards To Engage in Urine Drug Testing for Federal Agencies

AGENCY: National Institute on Drug Abuse, HHS.

ACTION: Notice.

SUMMARY: The Department of Health and Human Services notifies Federal Agencies of the laboratories currently certified to meet standards of Subpart C of Mandatory Guidelines for Federal Workplace Drug Testing Programs (53 FR 11986) dated April 11, 1988. The following laboratory's certification to engage in urine drug testing for Federal Agencies was suspended on October 15, 1991 (56 FR 54582, October 22, 1991) and was reinstated effective February 4, 1992.

HealthCare/Preferred Laboratories, 24451 Telegraph Road, Southfield, MI 48034, 800-225-9414 (outside MI), 800-328-4142 (inside MI).

FOR FURTHER INFORMATION CONTACT: Mona W. Brown, Press Officer, National Institute on Drug Abuse, room 10-A-39, 5600 Fishers Lane, Rockville, Maryland 20857; Telephone (301)-443-6245.

Richard A. Millstein,

Acting Director, National Institute on Drug Abuse.

[FR Doc. 92-3085 Filed 2-6-92; 8:45 am]

BILLING CODE 4160-20-M

National Institute of Mental Health; Meetings

Pursuant to Public Law 92-463, notice is hereby given of the meetings of the advisory committees of the National Institute of Mental Health for February/March 1992.

The initial review groups will be performing review of applications for Federal assistance; therefore, portions of these meetings will be closed to the public as determined by the Administrator, ADAMHA, in accordance with 5 U.S.C. 552b(c)(6) and 5 U.S.C. app. 2 10(d).

Summaries of the meetings and rosters of committee members may be obtained from: Ms. Joanna L. Kieffer, NIMH Committee Management Officer, Alcohol, Drug Abuse, and Mental Health Administration, Parklawn Building, room 9-105, 5600 Fishers Lane, Rockville, MD 20857 (Telephone: 301-443-4333).

Substantive program information may be obtained from the contacts whose names, room numbers, and telephone numbers are listed below.

Committee Name: Mental Health Small Business Research Review Committee.
Meeting Date: March 2-3, 1992.
Place: Washington Marriott, 1221 22nd Street, NW, Washington, DC 20037.
Open: March 2, 9-10:30 a.m.
Closed: Otherwise.
Contact: Gloria Levin, room 9C-14, Parklawn Building, Telephone (301) 443-1367.

Committee Name: Treatment Assessment Review Committee.
Meeting Date: March 2-3, 1992.
Place: Embassy Suites, 4300 Military Road, NW, Washington, DC 20015.
Open: March 2, 8:30-9:30 a.m.
Closed: Otherwise.
Contact: Barbara Campbell, room 9C-02, Parklawn Building, Telephone (301) 443-4666.

Committee Name: Child Psychopathology and Treatment Review Committee.
Meeting Date: March 9-11, 1992.
Place: Holiday Inn Chevy Chase, 5520 Wisconsin Avenue, Chevy Chase, MD 20815.
Open: March 9, 9-10 a.m.
Closed: Otherwise.
Contact: Doris Lee Robb, room 9C-15, Parklawn Building, Telephone (301) 443-6470.

Committee Name: Behavioral, Clinical, and Psychosocial Subcommittee of the Mental Health AIDS and Immunology Review Committee.
Meeting Date: March 11-12, 1992.
Place: Holiday Inn Chevy Chase, 5520 Wisconsin Avenue, Chevy Chase, MD 20815.
Open: March 11, 8:30-9:30 a.m.
Closed: Otherwise.
Contact: Regina M. Thomas, room 9C-15, Parklawn Building, Telephone (301) 443-6470.

Committee Name: Psychobiological, Biological, and Neuroscience Subcommittee of the Mental Health AIDS and Immunology Review Committee.
Meeting Date: March 11-12, 1992.
Place: Holiday Inn Chevy Chase, 5520 Wisconsin Avenue, Chevy Chase, MD 20815.
Open: March 11, 8:30-9:30 a.m.
Closed: Otherwise.
Contact: Rehana A. Chowdhury, room 9C-15, Parklawn Building, Telephone (301) 443-6470.

Committee Name: Clinical Subcommittee, Mental Health Special Project Review Committee.
Meeting Date: February 28, 1992.
Place: Holiday Inn Crowne Plaza, 66 Hale Avenue, White Plains, NY 10601.
Open: February 28, 8:30-9 a.m.
Closed: Otherwise.
Contact: Gewn Artis, room 9-C18, Parklawn Building, Telephone (301) 443-3944.

Dated: February 4, 1992.

Peggy W. Cockrill,

Committee Management Officer, Alcohol, Drug Abuse, and Mental Health Administration.

[FR Doc. 92-3024 Filed 2-6-92; 8:45 am]

BILLING CODE 4160-20-M

Centers for Disease Control

National Committee on Vital and Health Statistics (NCVHS) Subcommittee on State and Community Health Statistics: Cancellation of Meeting

This notice announces the cancellation of a previously announced meeting.

Federal Register *Citation of Previous Announcement: 57 FR 3059, January 27, 1992.*

Previously Announced times and Dates: 1 p.m.-5 p.m., February 20, 1992. a.m.-5 p.m., February 21, 1992.

BFGoodrich

The BFGoodrich Company
3925 Embassy Parkway
Akron, Ohio 44313-1799

October 21, 1991

Dr. Roy T. Gottesman
Vinyl Institute
Wayne Interchange Plaza II
155 Route 46 West
Wayne, NJ 07470

Dear Roy:

In response to your request, you should note that there are two main problems with the study by Wong et al. 1991, entitl d "An Industry-wide Epidemiology Study of Vinyl Chloride Workers, 1942-1982". First, the authors use the 7th rather than the 9th revision of the International Classification of Disease. The effect here is to lump all brain cancers together. Secondly, the authors leave the question of whether there is a relationship between VCM and brain cancer hanging without providing some logical comments and assessments.

While they reference Doll's earlier review paper in the introduction, they fail to mention what is important from that paper. Specifically, they fail to note that for brain cancer, and in fact all cancers except liver, there is no consistency across studies which is an important consideration in assessing causal relationships in epidemiology studies. Furthermore, the effect of other potential biasing/confounding factors (eg. other exposures) are not addressed.

When I obtained a copy of this publication, I quickly realized that this was the work that was sponsored by the CMA VCM Panel. Unfortunately, the authors failed to send a draft to the Panel for review prior to publication. When I discussed this with Dr. Shah at CMA, he indicated that CMA would notify them that they have violated their contract.

The next step will be for the whole Panel to consider what corrective actions are necessary and/or appropriate. Hopefully, the authors will be agreeable to add some clarifying comments in a letter to the editor.

At present, I view this as a CMA project. However, I will keep you posted as things progress.

Best regards,

THE BFGOODRICH COMPANY

Robert K. Hinderer,Ph.D.
Manager, Health and Toxicology
Environment, Health and
Safety Management Systems

1021-4/jp

cc: Dr. Drumwright
Dr. Shah - CMA

Vista Chemical Company

900 Threadneedle
Post Office Box 19029

Houston, Texas 77224

NOV 12 '91

Dr. H Shah
FYI
R. Hinderer

November 8, 1991

J.R. Drumwright, M.D.
Manager-Medical

Roy T. Gottesman
Vinyl Institute
Wayne Interchange Plaza II
155 Route 46 West
Wayne, N.J. 07470

Dear Roy:

Bob Hinderer and I have discussed the Wong et al 1991 study entitled "An Industry-wide Epidemiology Study of Vinyl Chloride Workers, 1942-1982".

I first heard about the updated report while attending the Denver meeting of the VCSA. The BNA report had addressed some of Wong's conclusions as they were reported in the American Journal of Industrial Medicine.

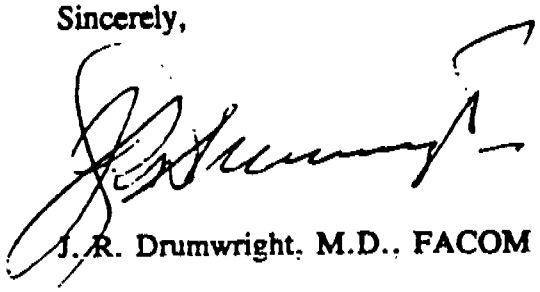
My comments essentially agree with those already presented to you by Bob Hinderer. Namely, the use of the ICD-7 classification lumps all brain and other CNS cancers together; death certificate data without adequate histopathological diagnosis/review and assumptions established without specific cause/effect, consistency in latency period, etc.

Bob's recognition that the authors had apparently failed to have the CMA Panel review the report prior to publication by Wong led to his discussing this with Dr. Shah. It is my understanding that CMA will be addressing this with Dr. Wong.

In any event, the study has been published and we must be cognizant of this when new litigation appears. Hopefully, clarification by Wong et al will receive adequate publication as well.

I plan to keep in contact with Bob and will keep you posted as well on any events dealing with this issue.

Sincerely,



J.R. Drumwright, M.D., FACOM

JRD/sjl

cc: JRD Vi File
T. Grumbles
R. K. Hinderer, PhD
Mgr. Health & Tox.
B.F. Goodrich Co.
3925 Embassy Pkwy.
Akron, Ohio 44313-1799

Guidelines for Good Epidemiology Practices for Occupational and Environmental Epidemiologic Research

Th Chemical Manufacturers Association's Epidemiology Task Group

The Guidelines for Good Epidemiology Practices (GEPs) for Occupational and Environmental Epidemiologic Research address the conduct of studies generally undertaken to answer questions about human health in relationship to the work place or the environment. The GEPs propose minimum practices and procedures that should be considered to help ensure the quality and integrity of data used in epidemiologic research and to provide adequate documentation of the research methods. The GEPs address the process of conducting individual epidemiologic studies and do not prescribe specific research methods.

The Guidelines for Good Epidemiology Practices propose minimum practices and procedures in the following areas:

I. Organization and Personnel
II. Facilities, Resource Commitment, and Contractors
III. Protocol
IV. Review and Approval
V. Study Conduct
VI. Communication
VII. Archiving
VIII. Quality Assurance

Although the Guidelines for Good Epidemiology Practices will not guarantee good epidemiology, they do provide a useful framework for ensuring that all research issues are adequately addressed. This framework is proposed as a first step in improving epidemiologic research practices through adherence to sound scientific research principles.

Appendices provide an overview of standard operating procedures, a glossary of terms used in the Guidelines, and suggested references on occupational epidemiology methods.

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Epidemiologic studies provide unique, valuable information about the relationship between human health and exposure to substances in the environment and the workplace. While the contributions of toxicology and epidemiology are complementary, there is general agreement that reliable human evidence (epidemiologic studies) should take precedence over animal data (toxicological studies) in public policy and regulatory decision making. However, because of the nonexperimental nature of occupational and environmental epidemiologic studies, scientific controversy often surrounds the interpretation and significance of epidemiologic study results. In addition, controversy frequently concerns the quality of the data used, the appropriateness of the study design, and the process used to conduct the study. The nonexperimental nature of the epidemiologic studies cannot be changed, but the value of such research can be improved. The Guidelines for Good Epidemiology Practices address those issues—data quality, study design, and study conduct—that are under the control of the investigator.

Goals for the Guidelines for Good Epidemiology Practices

The Guidelines for Good Epidemiology Practices (GEPs) address the conduct of studies generally under-

taken to answer questions about human health in relationship to the workplace or the environment. The GEPs propose minimum practices and procedures that should be considered to help ensure the quality and integrity of data used in epidemiologic research and to provide adequate documentation of the research methods. The GEPs address the process of conducting individual epidemiologic studies and do not prescribe specific research methods.

Although Guidelines for Good Epidemiology Practices will not guarantee good epidemiology, they will provide a framework within which these issues might be addressed. The Guidelines have the following goals:

1. To provide a framework to assist researchers in adhering to good epidemiologic research principles.
2. To promote sound epidemiologic research by encouraging quality data collection and analysis.
3. To facilitate the continued development of improved epidemiologic research methodology.
4. To provide a framework for evaluating epidemiologic studies.
5. To improve the acceptance of studies that use sound scientific methods.
6. To improve the utility of epidemiologic studies in the formulation of public policy.
7. To improve public confidence in epidemiology as a scientific discipline.
8. To facilitate the conservation of technical resources by promoting careful study design and planning of study conduct.

Alternative Guidelines

A number of other organizations have also become interested in developing or applying guidelines to epidemiologic research.[1,2] The Office of Management and Budget (OMB) published "Guidelines for Federal Statistical Activities" in which they defined "statistics" as the quantitative results of a survey or study collected for the purposes of reporting population characteristics.[3] The Environmental Protection Agency (EPA) recently modified both the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA) good laboratory practice standards (GLPs) to specifically include epidemiology.[4,5] In response to comments, EPA states that "all studies, including epidemiologic studies . . . [should] be performed under GLP standards. EPA recognizes that in such studies data used may not have been generated in conformance with . . . GLP standards. However, it is EPA's position that the study itself can be conducted and submitted to EPA in accordance with the GLP standards."

The GLPs are directed primarily at experimental laboratory research, often involving the use of animals or cell culture systems. The GLPs address issues that confront researchers conducting experimental toxicological research. The Guidelines for Good Epidemiology Practices were developed in part to provide an alternative to the GLPs that would appropriately address the issues confronted by epidemiology researchers conducting nonexperimental studies.

Scope and Application

The Guidelines for Good Epidemiology Practices can be applied to all types of occupational and environmental epidemiologic research. Epidemiologic studies often evolve through a number of stages that might include proposals, feasibility studies, and measurement instrument validation studies that precede the development of a protocol. The GEPs should encompass all activities that begin with protocol development.

Clearly, large complex studies will benefit from the careful planning and thorough documentation implicit in these guidelines. Adherence to the spirit of the guidelines will be beneficial for those activities preceding protocol development as well as more informal investigations such as health hazard assessments/evaluations or small cluster investigations. Even in circumstances of immediate public health concern, the guidelines will provide a useful framework to ensure that all research issues are adequately addressed.

Further Development of the Guidelines for GEPs

The current document is a first step in developing a framework for improving epidemiologic research practices through adherence to sound scientific research principles. The guidelines emphasize data quality and integrity and adequate documentation of research methods. These guidelines should evolve based on the experiences gained through their application to studies.

A Special Note to Readers: As an aid to readers, a glossary of terms is provided in Appendix 2. These definitions reflect the use of the terms in this document. In an effort to be concise and clear, some sections of the guidelines for GEPs include examples and/or further explanation of the issue. Examples or elaborative text appear in *italics*.

Guidelines for Good Epidemiology Practices for Occupational and Environmental Epidemiologic Research

I. Organization and Personnel

A. Organizational Structure

The organization or individual conducting the research shall be fully responsible for the operation and performance of the research. The organization shall be a legal entity with a governing body that sets policy and that is fully responsible for the administrative aspects of the organization and its related research activities.

The relationship, roles, and responsibilities of the organizations and/or individuals sponsoring or conducting the study should be carefully defined in writing.

For example, this should include delineating the roles and responsibilities to be assumed by the study sponsor and the contractor(s) in communicating various aspects of the study as well as data ownership, archiving, etc.

B. Personnel

Personnel engaged in epidemiologic research and related activities shall have the education, training, and/or experience necessary to competently perform the assigned functions. The organization shall maintain a current summary of training and experience of these personnel. A job description for each individual engaged in or supervising activities shall be maintained and updated periodically.

II. Facilities, Resource Commitment, and Contractors

A. Facilities

Adequate physical facilities shall be provided to all those engaged in epidemiologic research and related activities. Sufficient resources, eg, office space, relevant equipment, and office/professional supplies, shall be available to ensure timely completion of all studies. Suitable storage facilities shall be available to maintain research materials in a safe and secure environment.

B. Resource Commitment

Sufficient commitment shall be made at the beginning of each study to ensure its timely and proper completion (see section III(L): Protocol).

C. Contractors

For the purposes of ensuring and documenting the contractor's conformance with the Guidelines for Good Epidemiology Practices, it is recommended that the study sponsor have the right during the course of the study, and for a reasonable period following completion of the study, to inspect the contractor's facilities, including equipment, technical records, and records relating to the work conducted under the sponsor's contract.

III. Protocol

Each study shall have a written protocol. This protocol must be approved before the study begins (see section IV: Review and Approval).

The protocol should include the following:

A. A descriptive title.

B. The names, titles, degrees, addresses, and affiliations of the study director, principal investigator, and all co-investigators.

C. The name(s) and address(es) of the sponsor(s).

D. An abstract of the protocol.

E. The proposed study tasks and milestones, including study approval data (date protocol signed by all signatories), study start date (first date that the protocol is implemented), periodic progress review dates, and completion date.

F. A statement of research objectives, specific aims, and rationale.

The statement should identify the immediate purpose of the investigation. For example, it might also indicate whether the study will be exploratory data analysis, hypothesis testing, or a combination of both as well as whether the proposed study will address previously unanswered questions, will attempt to corroborate or confirm previous findings, or will be routine epidemiologic surveillance.

G. A critical review of the relevant literature to evaluate applicable findings.

For example, the literature review should encompass animal and human experiments, clinical studies, vital statistics, and previous epidemiologic studies. The literature review should be of sufficient depth to identify potential confounders and effect modifiers and to determine areas where new knowledge is needed.

H. A description of the research methods, including:

1. The overall research design and strategy and reasons for choosing the proposed study design.

For example, case-control, cohort, cross-sectional, nested case-control, or other hybrid designs.

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2. The data sources for exposure, health status, and risk factors.

   For example, questionnaires, biological measurements, exposure/work history record reviews, or exposure/disease registries.

3. Clear definitions of health outcomes, exposure, and other measured risk factors as well as selection criteria, as appropriate, for exposed and nonexposed persons, morbidity or mortality cases, and referent groups.
4. Projected study size and, if appropriate, statistical power.
5. The methods to be used in assembling the study data.

   This should include a description of, or reference to, methods used to control, measure, or reduce various forms of error—eg, bias due to selection, misclassification, interviewer, or confounding—and its impact on the study. Pretesting procedures for research instruments and any manuals and formal training to be provided to interviewers, abstractors, coders, or data entry personnel should be described or referenced.

6. Procedures for handling the data in the analysis.

   This should include a description of procedures for defining or categorizing exposure and health outcome variables for purposes of analysis. It should also include provisions for assessing dose-response relationships and treatment of potentially confounding and effect modifying variables.

7. Methods for data analysis.

   This should include procedures to control, if possible, sources of bias and their influence on results and a description of planned comparisons and methods for analyzing and presenting results.

8. Major limitations of the study design, data sources, and analytic methods.
9. Criteria for interpreting the results.

   This should include a brief discussion of the characteristics of the proposed study design, including limitations, that will influence the discussion of the results. It also should state criteria for assessing biological plausibility, internal and external consistency of the findings, and causal inference. The statistical tests to be applied to the data and procedures for obtaining point estimates and confidence intervals of measures of occurrence or association should also be described.

I. A description of plans for protecting human subjects.

   This should include information about whether study subjects will be placed at risk as a result of the study, under what circumstances informed consent will be required, and provisions for maintaining confidentiality of information on study subjects.

(See section IV: Review and Approval; section V: Study Conduct; section VI: Communication; and section VII: Archiving.)

J. A description of, or reference to, quality assurance and quality control procedures for all phases of the study. As appropriate, include certification and/or qualifications of any supporting laboratory or research groups (see section VIII: Quality Assurance).

K. A description of plans for disseminating and communicating study results (see section VI: Communication).

L. Resources required to conduct the study.

   Describe, for example, time, personnel, and equipment required to conduct the study, including a brief description of the role of each of the personnel assigned to the research project.

M. The bibliographic references.

N. Addenda, as appropriate.

   For example, correspondence, collaborative agreements, institutional approvals, and samples of the informed consent forms, questionnaires, and representative samples of other documents to be used in the study.

O. A dated protocol review and approval sign-off sheet for the study director, principal investigator, co-investigators, and all reviewers (see section IV: Review and Approval).

P. Dated amendments to the protocol.

IV. Review and Approval

Review of study protocols and final reports should encompass all aspects of a study outlined in the Guidelines for Good Epidemiology Practices (see section III: Protocol and section V(D): Study Conduct). All reviews should be conducted in a timely fashion. It may be appropriate to involve worker or community representatives in the planning and review of the protocol and study results.

A. Scientific Review

The study protocol shall receive appropriate scientific review by qualified person(s) who are not part of the investigative team to ensure that the study is designed to address the objectives of the research and that the protocol is written according to Guidelines for Good Epidemiology Practices. The nature and circumstances of this review shall be documented (see section III: Protocol).

The scientific aspects of the completed study shall receive appropriate technical review to ensure that the

abstract, summary, and conclusions are supported by the underlying data, methods, and analyses (see section V: Study Conduct).

B. Ethical Review

The ethical aspects of each study protocol shall be reviewed by an institutional review board or other comparable review procedure.

This review should consider:

1. Obligations to research subjects.

   For example, protecting the welfare of study subjects; the need for, and content of, communications and informed consent; protecting privacy; and maintaining confidentiality.

2. Obligations to society.

   For example, avoiding conflicts of interest; avoiding partiality; disseminating the study's findings; data sharing; and pursuing responsibilities with due diligence.

3. Obligations to funders and employers.

   For example, specifying obligations in contractual form of how research is to be conducted and how it may involve ethical, technical, administrative, or legal responsibilities; presenting methods and alternatives; and protecting privileged information.

4. Obligations to colleagues.

   For example, promoting and preserving public confidence in epidemiologic research while not over- or underestimating the methods or results of epidemiologic inquiry; reporting methods and results; and disseminating the study's findings.

C. Administrative Review

The administrative aspects of the study protocol shall receive appropriate review and written approval by sponsors, contractors, and associated third parties to ensure that sufficient resources are available to complete the study in a timely and proper fashion.

Reports shall include a statement that the study was completed in accordance with the protocol, including any approved modifications to the protocol, and in accordance with the GEPs. Any deviations from the GEPs shall be explained and documented (see section VIII: Quality Assurance).

V. Study Conduct

While the study director shall be responsible for the overall research program, the principal investigator shall be responsible for the individual research project, including the day-to-day conduct of the study, interpretation of the study data, and preparation of a final report. These responsibilities extend to all aspects of the study including periodic reporting of study progress as well as quality assurance. In some situations, the study director and the principal investigator may be the same person.

To ensure the proper conduct of the study, personnel shall adhere to sound research principles and practices established according to the protocol.

A protocol must be approved before the study begins. The study shall be conducted in accordance with the protocol; all deviations from the protocol shall be properly documented and authorized by the principal investigator.

If a decision is made not to complete a research project, the reasons for that decision shall be put in writing, dated, and signed by the responsible party, ie, the individual who makes the decision to terminate the study.

A. Protection of Human Subjects

Procedures for protecting human subjects shall be followed (see section III(I): Protocol and section IV(B): Review and Approval). Confidential information about study subjects shall be protected using established procedures.

If stipulated by the study protocol and/or required by an institutional review board, each study subject shall be informed about the purpose of the study and any risks associated with participating in the study. Written consent, if required, shall be obtained from each study subject before he/she participates in the study.

Written consent shall include at a minimum:

1. Purpose of the research or study.
2. Name(s), address(es), and phone number(s) of personnel available to answer questions about the research and the rights of study subjects.
3. Expected duration of subject's participation.
4. Eligibility requirements for study participation.
5. Possible benefits to the study subject or others of study results.
6. Statement on the voluntary nature of participation in the study and the right of the study subject to discontinue participation at any time.
7. Statement of confidentiality of records identifying the study subject, including reasonable exceptions to absolute confidentiality, eg, sharing of information with the study subject's personal physician or as required by court order.
8. Description of any foreseeable risks or discomforts to the study subject.
9. Statement of availability of results.

B. Data Collection and Verification

All data collected for the study should be recorded directly, accurately, promptly, and legibly. The individual(s) responsible for the integrity of the data, computerized and hard copy, shall be identified.

All procedures used to verify and promote the quality and integrity of the data shall be outlined in writing (see section VIII: Quality Assurance). An historical file of these procedures shall be maintained, including all revisions and the dates of such revisions. Any changes in data entries shall be documented.

C. Analysis

All data management and statistical analysis programs and packages used in the analyses should be documented. All dated versions used in research shall be kept with accompanying documentation (see section VII: Archiving).

D. Study Report

Completed studies shall be summarized in a final report that accurately and completely presents the study objectives, methods, results, and the principal investigator's interpretation of the findings.

The final report shall include at a minimum:

1. A descriptive title.
2. An abstract.
3. Purpose (objectives) of the research as stated in the protocol.
4. The names, titles, degrees, addresses and affiliations of the study director, principal investigator, and all co-investigators.
5. Name(s) and address(es) of sponsor(s).
6. Dates on which the study was initiated and completed.
7. Introduction with background, purpose, and specific aims of the study.
8. A description of the research methods, including:
   a. the selection of study subjects and controls,
   b. the data collection methods used,
   c. the transformations, calculations, or operations on the data, and
   d. statistical methods used in data analyses.
9. A description of circumstances that may have affected the quality or integrity of the data (see section VIII: Quality Assurance).
10. A summary and analyses of the data.
    Include sufficient tables, graphs, and illustrations to present the pertinent data and to reflect the analyses performed.
11. A statement of the conclusions drawn from the analyses of the data.
12. A discussion of the implication of study results.
    Cite prior research in support of and in contrast to present findings. Discuss possible biases and limitations in present research.
13. References.
14. A statement describing the location where all source data and the final report are stored. (see section VIII: Archiving).
15. A dated study report review sign-off sheet for the study director, principal investigator, co-investigators, and reviewers and/or auditors (see section IV: Review and Approval and section VIII: Quality Assurance).

VI. Communication

Each organization shall predetermine procedures under which communications of the intent, conduct, results, and interpretations of an epidemiologic study will occur, including what function individuals associated with the research must fulfill. These individuals should include the principal investigator, study director, and/or the sponsor. This procedure may be documented in the form of a company standard operating procedure, in the study protocol, or through contractual agreement.

Government agencies shall be informed of study results in a manner that complies with applicable regulatory requirements.

Scientific peers shall be informed of study results by publication in the scientific literature or presentations at scientific conferences, workshops, or symposia, to the extent possible.

All study subjects shall be informed of the study results and any interpretation of the study findings and conclusions, to the extent possible. Study subjects may be informed in person, through meetings, video tapes, letters, newsletters, summary reports, or other appropriate communication. Information about study results shall be provided in language appropriate for the audience.

VII. Archiving

There shall be physically secure archives f r the orderly storage and expedient retrieval of all study related material. An index shall be prepared to identify the archived contents, to identify their location, and to identify by name and location any materials that by their general nature are not retained in th study archive.

Access to the archives shall be controlled and limited to authorized personnel only. Special procedures may be necessary to ensure that access to confidential information is limited and that the confidentiality of information about study subjects is protected (see section III(I): Protocol).

At a minimum, the study archive should contain, or refer to, the following:

A. Study protocol and copies of all approved modifications.

B. A final report of the study.

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C. All source data and, where feasible, specimens. A printed sample of the master computer data file(s) with reference to the location of the machine readable master.

If the data include any employee medical records subject to the Access to Employee Medical Records Regulation (29 CFR 1910.20), *the records shall be retained according to the provisions of this rule.*

D. Documentation adequate to identify and locate all computer programs and statistical procedures used, including version numbers where appropriate (see section V(C): Study Conduct).

E. Copies of computer printouts, including relevant execution code, that form the basis of any tables, graphs, discussions, or interpretations in the final report. Any manually developed calculations shall be documented on a work sheet and similarly retained.

F. Correspondence pertaining to the study, standard operating procedures, informed consent releases, copies of all relevant representative material, copies of signed institutional review board and other external reviewer reports, and copies of all quality assurance reports and audits.

Include, for example, questionnaires, name, make and model numbers of relevant measurement instruments, calibration information and procedures.

G. Original documents for the following research materials shall be included in the archives:

1. Laboratory/research notebooks.
2. Coder modification notebooks.
3. Signed and dated copies of the research protocol and final report.

VIII. Quality Assurance

Written procedures shall be established to ensure the quality of the data used in a study (see section III(J): Protocol and section V: Study Conduct). These procedures shall address data collection and completeness, coding and computer input, storage and retrieval, and data validation and analysis. Any deviations from the GEPs shall be explained and documented in the final report (see section IV(C): Review and Approval).

An individual who is not part of the investigative team should be assigned as a study quality assurance auditor. This individual shall, no less than annually, review study compliance with the written quality assurance procedures. The study quality assurance auditor shall prepare a written summary of the audit. The principal investigator should respond in writing to the audit report, including any remedial actions taken.

Quality assurance activities shall address the preceding sections of these guidelines as well as monitor conformance with established standard operating procedures (SOPs) (see Appendix 1: Standard Operating Procedures).

APPENDICES

Appendix 1: Standard Operating Procedures

Appendix 2: Glossary of Terms Used in the Guidelines for Good Epidemiology Practices

Appendix 3: Suggested References on Occupation. Epidemiology Methods

Appendix 1

Standard Operating Procedures

The Guidelines for Good Epidemiology Practices address the conduct of epidemiologic studies rather than the management of epidemiologic research programs. Many of the suggested guideline requirements can be fulfilled by reference to standard operating procedures for the research program.

Standard operating procedures (SOPs) are written, detailed descriptions of routine procedures involved in performing epidemiologic studies. Reproducibility, accuracy, and validity are ensured when SOPs are designed to clearly reflect each facility's research procedures. It should be the responsibility of a designated individual to develop and continuously review and update SOPs pertaining to his area of responsibility. Signatures of approval from the department's managing personnel or appropriate designees should be obtained for all new and updated versions. Significant changes in established SOPs should be maintained, including all revisions and the dates of such revisions. The manual of SOPs should be readily available to all research and administrative personnel.

Standard operating procedures should include:

1. A statement of the purpose of the standard operating procedure.
2. A detailed description of the procedure.
3. The person responsible or the training level required to perform the procedure.
4. The date of issue (effective date).
5. The issue number/revision number.
6. Signature of preparer.
7. Authorizing/reviewing signature of management.

Examples of research program activities for which SOPs could be established include:

1. Procedures for collecting raw data.
2. Procedures for validating the completeness of the study population.
3. Procedures for coding death certificates.
4. Procedures for assessing error rates in data abstraction and coding.

5. Security procedures for ensuring the integrity of the raw data and computer records.
6. Procedures for archive management.
7. Procedures for standard industrial hygiene sampling and analytic methods.
8. Procedures for scientific review.
9. Required composition of scientific review boards.
10. Procedures for data analysis.
11. Procedures for communications.

Appendix 2

Glossary of Terms Used in the Guidelines for Good Epidemiology Practices

The definitions below reflect the use of these terms in the Guidelines for Good Epidemiology Practices. These terms may have additional or different meanings in another context.

Descriptive Studies—a description of the population under study and the occurrence of disease or disease-related phenomena in populations. The latter may be presented as incidence or prevalence rates according to basic group characteristics such as age, sex, race, and/or geographic area.[6]

Epidemiologic Surveillance—periodic scrutiny of a defined population using epidemiologic techniques to detect changes and trends in the distribution of morbidity, mortality, or disease risk factors within that population.

Exploratory Data Analysis—analysis of a data set without a predetermined hypothesis, sometimes referred to as a descriptive study. This can be done with or without tests for statistical significance. Exploratory data analysis can be used to generate hypotheses, to suggest the most appropriate analytical techniques, to set priorities for future research, and to help focus subsequent analyses. A study may be a hybrid design and combine both exploratory data analysis and tests of the null hypothesis.

Hypothesis Testing Study—an analytic study that, through the use of tests of statistical significance, seeks to refute specific predetermined null hypotheses; the process of answering a specific *a priori* question or group of questions. A study may be a hybrid design and combine both exploratory data analysis and tests of the null hypothesis.

Legal Entity—legal existence. An entity, other than a natural person, who has sufficient existence in legal contemplation that it can function legally, be sued or sue, and make decisions through agents as in the law of corporations.

Null Hypothesis—the study question stated in a null fashion so that it can be tested for statistical significance, eg, tested to determine whether the results might occur by chance alone.[7]

Principal Investigator—the research investigator who has direct responsibility for the initiation, conduct, analysis, and interpretation of a specific study or investigation.

Quality Assurance—the overall program that ensures conformance to established performance standards. The quality assurance process encompasses all aspects of the research operation from the protocol to the final report.

Scientific Review—critical evaluation of a scientific study or investigation at any stage of development by peers of the principal investigator.

Standard Operating Procedure (SOP)—any standard method or process for conducting or accomplishing a routine research procedure not unique to a specific study.

Study—epidemiologic research relating to the distribution and determinants of health-related outcomes in specified populations and the application of this research to control of health problems.

Study Director—the research director, manager, or administrator who is responsible for managing the research program and who provides oversight of studies or investigations conducted within the research program.

Appendix 3

Suggested Bibliography on Occupational Epidemiology Methods

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