MANAGEMENT GUIDE

MONSANTO CHEMICAL COMPANY



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MANAGEMENT GUIDE

MONSANTO CHEMICAL COMPANY

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PREFACE

Any group of people working together must have, formally or informally, consciously or unconsciously, some framework of principles and rules to guide them in attaining the objectives they are seeking. Each must know what his own objectives are, what duties he is expected to carry out and what are his relationships to those who are working with him.

However, the sin of over-organization can be as bad as that of under-organization. In other words, to define too tightly is to hamper rather than to help. Hence, in this MANAGEMENT GUIDE *we have tried to outline in a broad way the objectives, duties and relationships of the various segments of our organization without giving too many details as to exactly how they are to be accomplished. We leave to the individual executive the development of the details of his job so that both he and it may grow in a free climate and thereby result in a better and greater Monsanto Chemical Company.*

Charles Allen Thomas –

President

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I. FOREWORD

Monsanto Chemical Company is a group effort into which some men, some women and some institutions have put their money, some individuals their services - be they labor, brains or talents - and our government its protection under law. The objective of the company is to return to these contributors the fairest optimum for their efforts. In addition, this group effort has a silent beneficiary, the public.

In our thinking, the optimum means the balanced best. This may be, but is by no means always the maximum. For instance, the maximum return to the stockholders would be 100 per cent of the net profits after taxes, but such would hardly be the optimum for the ultimate welfare of the company and, therefore, of the stockholders themselves.

OBJECTIVES

The objectives of the company may be defined in more detail as:

Optimum Profits

To earn optimum profits from the long-range standpoint as a company and from each of its product lines.

Optimum Sales Volume

To obtain the optimum sales volume, taking into account all factors, for the company as a whole and for each of its product lines.

Optimum Costs

To attain optimum costs of manufacture - the lowest long-term value for optimum profits - as a company and for each of its product lines.

Optimum Services

To enter into and to remain in only those businesses and product lines in which the company is able to perform a significant service to its customers, shareowners, employes and the public.

Optimum Use and Distribution of Proceeds

To use and to distribute the proceeds from the sale of its products and services in the balanced best interest of its customers, shareowners, employes, suppliers and the public.

Optimum Customer, Employe and Public Relations

To earn, to deserve and to retain the favorable regard of its customers, shareowners, employes, suppliers and the public - providing real leadership in all of its human relations.

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Optimum Confidence in the Company and Its Management
To engender by its objectives, principles and actions such confidence in the company and its management by its customers, shareowners, employes, suppliers and the public as to justify its slogan "*Serving Industry Which Serves Mankind.*"

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II. ORGANIZATION PRINCIPLES

Every group effort such as ours requires organization. An organization is worth while only if it enables a group of persons to work together effectively and happily toward a common goal. An organization is something dynamic, it changes and it must change with the times. Therefore, we shall continuously study the type and the facets of our organization and improve it as the situation warrants.

For this purpose we have certain fundamental organization principles:

(1) We dedicate ourselves to the concept of the importance and well-being of the capable individual as the key point of the corporate system within those limitations necessary for the corporate purposes.

(2) We must recognize and develop personnel resources within the company and keep them properly renewed to the end of successful perpetuation of the company.

(3) We must continually strike the optimum balance between centralization and decentralization by the use of divisions and by pushing responsibility downline as far as possible.

(4) We must define functions and relationships clearly but not so tightly as to hamper initiative, action and growth.

(5) We must make authority commensurate with responsibility in all job assignments.

(6) We must measure performance of the individual and of the group to the best fulfillment of the company's responsibilities and obligations.

(7) We must recognize the need to maintain total corporate personality and its course or direction through adequate control by individual leadership.

By leadership we mean the process of getting people to do things because they want to and not because they are commanded to.

The purpose of this MANAGEMENT GUIDE is to chart the course, lay down the framework, indicate the goals to be reached and leave to the individual as much freedom as possible in choosing his methods of attaining them.

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III. ORGANIZATION

The attainment of corporate objectives requires three definite areas of responsibility: trustee, executive, operating.

A. Trustee Area

(1) Board of Directors

The Board of Directors is elected by the stockholders "and is entrusted by them with the whole management of the affairs of the company."

No one who has been or may become an officer or employe of the company shall serve as a director for more than three years after retirement as such officer or employe. The Secretary of the company is Secretary of the board.

All employes of the company are ultimately responsible to the board through the President.

The Board of Directors shall:

i. Act on all matters involving major corporate policies or transactions and exercise general control over the business and property of the company. It may designate committees to exercise powers of the board.

ii. Elect officers of the company and fix their salaries.

iii. Exercise all powers of the company and do all lawful acts and things as are not by statute, the Certificate of Incorporation or the Bylaws required to be exercised by the stockholders.

iv. Review and approve requests for capital appropriations for (1) new projects, (2) replacements, (3) each overrun, or (4) each change in scope, which exceed $250,000 per item and have been recommended by the Executive Committee.

v. Have authority to amend or repeal Bylaws of the company.

vi. Hold regular meetings at the offices of the company in St. Louis unless some other place is specified, at 1:00 PM on the second Thursday of each month.

vii. Hold special meetings as called by the President on two days' notice to each Director or by the President or Secretary similarly on the written request of two Directors. Four

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Directors are necessary to constitute a quorum. The act of a majority of the Directors present at any meeting at which there is a quorum is the act of the board except as may be otherwise specifically provided by statute, the Certificate of Incorporation or the Bylaws.

The Chairman of the Board presides at all meetings of the Board of Directors and of the stockholders, except such as under the law must be presided over by the President or a specially appointed chairman. He acts in an advisory capacity with respect to matters of policy and other matters of importance pertaining to the affairs of the company. He, or the President by his delegation, sends out reports and other messages to stockholders from time to time.

(a) Executive Committee

The Board of Directors elects five of its members to constitute its Executive Committee. The committee appoints its own Secretary. Neither a division general manager nor a staff department director may be on the committee. The Chairman of the committee is appointed by the board. Two members shall constitute a quorum. The committee consists of the Chairman of the Board, three other board members, and the President who serves as Chairman. The Executive Committee is responsible to the Board of Directors.

The Executive Committee shall:

i. In the interval between meetings of the board, have and exercise the powers of the board, excepting,

   a. Such financial matters as come within the jurisdiction of the Finance Committee,

   b. Those matters as regards which other specific directions are given by the board, and

   c. Matters relating to corporate organization, changes of capital structure and financing, the closing of stock transfer books, the declaring of dividends and voting stock of other companies.

ii. Have authority to approve requests for capital appropriations for:

   a. New projects,

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b. Replacements,

c. Each overrun, or underruns, or

d. Each change in scope,

up to $250,000 for each item and in an aggregate amount of $1,000,000 per month, averaged over the calendar year.

It may delegate to division general managers authority to approve such expenditures in lesser dollar amounts.

Proposals exceeding the above-mentioned limits shall be referred by the committee with its approval to the board for action.

iii. Be responsible for and evaluate the over-all long-range development plans of the company so that they will be an effective and balanced organic whole, not a congeries of divisional and departmental plans.

iv. Report all of its acts and proceedings to the board at its next regular meeting.

v. Resolve disagreements between any units of the company which have not been settled by the Executive Offices of the President or the President.

vi. Hold meetings weekly on Monday at 2:00 PM and special meetings any time at the call of the Chairman.

Each member of the Executive Committee has authority to approve at any time expenditures not exceeding $10,000 for any matter (except capital expenditures) relating to the business or affairs of the company.

Communication With Executive Committee

All reports, requests, correspondence, etc. for the Executive Committee should be sent to:

Secretary, Executive Committee
St. Louis, Missouri

in sufficient number so there will be a copy for each member of the Executive Committee and two additional copies for the Secretary.

Matters which are submitted to the Executive Committee will not be considered until they have been on file with the committee for at least one week.

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(b) Finance Committee

The Finance Committee is a committee of the Board of Directors and responsible to it. It has general supervision and control of all the usual and ordinary financial affairs of the company and it is of equal rank with the Executive Committee.

The Finance Committee is composed of the Chairman of the Board, the President and one or more members of the board. Division general managers and staff department directors may not sit on it. The Chairman of the committee is appointed by the board and the Secretary by the committee.

The Finance Committee shall:

i. Keep informed of the company's financial condition and its requirements for funds.

ii. Recommend to the board on:

   a. Investment of surplus funds,

   b. Designation of depositories,

   c. Time, kind and amount of securities to be issued by the company for supplying its requirements for funds,

   d. Payment of dividends and conditions thereof, and

   e. Salaries for all officers, after receiving recommendation of the Executive Committee.

iii. Report all acts and proceedings of the committee to the board at its next regular meeting.

iv. Meet at the time and place fixed by the committee.

B. Executive Area

(1) Executive Offices of the President

Responsibility for implementing the plans and policies of the Board of Directors and its Executive Committee is lodged in the Executive Offices of the President, which consists of the President, Executive Vice President, and six functional Vice Presidents. Under the law of Delaware and the Bylaws of the company, the President cannot relieve himself of line responsibility for management of the company and for seeing that the orders and resolutions of the Board of Directors are carried out. How-

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ever, he can delegate authority and responsibility to the Executive Vice President and other Vice Presidents of the company, while himself remaining accountable to the board and its Executive Committee for their performance. To advise and assist the President are an Executive Vice President and six functional Vice Presidents, expert in their respective fields, to whom the President has delegated functional authority and responsibility as set forth more fully in the following pages.

The functional Vice Presidents report to the President or in his absence to the Executive Vice President. The Executive Vice President reports to the President, and the President to the Board of Directors.

(a) President

The President is the chief executive officer of the company. He reports to the Board of Directors, or its committees, and sees that they are informed on all phases of company activity. The following report to him:

Executive Vice President

Functional Vice Presidents

General managers of the operating divisions

Director of the Advertising and Public Relations Department - re public relations

Chairman of the Budget Committee

Manager of the Washington office

Assistants to the President

In the absence of the Chairman of the Board, he shall preside at all meetings of the stockholders and of the Board of Directors.

He shall have general and active management of the business of the corporation, see that all orders and resolutions of the Board of Directors are carried into effect. He shall also execute bonds, mortgages and other contracts under the seal of the corporation. Unless otherwise ordered by the Board of Directors, the President shall attend on behalf of this company and vote at any meeting of stockholders of any corporation in which the company may hold stock. He may also execute proxies in favor of other persons so to act for the company.

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In addition to his over-all duties, he has responsibility for the following:

i. Maintain the budgetary control of the company.

ii. Approve basic programs in public relations, oversee their execution and evaluate their results.

iii. Select division general managers (with approval by the Board of Directors) and staff department directors, and interpret the company's policies and objectives in terms of their duties and responsibilities.

iv. Serve as Chairman of the Executive Committee, member of the Finance Committee and ex-officio all other committees, except Bonus and Stock Option.

v. Establish a plan of organization, with approval of the Board of Directors, which will enable all parts and members of the company to function most effectively in reaching established objectives.

vi. Have authority to approve requests for capital expenditures not to exceed $150,000 on each project after consultation with other members of the Executive Offices and to make recommendations to the Executive Committee on projects exceeding $150,000.

viii.

vii. Fix, or delegate the responsibility for fixing, salaries for all employes not officers.

viii. Approve the broad program of activities of the Washington office and evaluate the results.

(b) Executive Vice President

The Executive Vice President shall assume and perform the duties and exercise the powers of the President as the chief executive officer of the company in the absence or disability of the President. He shall also handle such general administrative duties as may be directed by the Board of Directors or by the President.

In addition to his regular duties, he shall:

i. Serve as Chairman of the Salary Committee and see that established salary policies are carried out.

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ii. Establish effective inventory levels and insure that inventories are in proper balance, both qualitatively and quantitatively.

iii. Have authority to approve requests for capital expenditures not to exceed $150,000 each after consultation with other members of the Executive Offices and to make recommendations on projects exceeding $150,000 to the President and Executive Committee.

(c) Functional Vice Presidents

General

A functional Vice President is a member of the Executive Offices of the President, responsible for coordination of a definite area of company activity by counseling, planning, setting standards, evaluating budgets and performance, and reporting results. In his special field of activity, a functional Vice President is delegated the responsibility for the following:

i. Participate with the other functional Vice Presidents, the division general managers and staff department directors in developing and evaluating the long-term objectives of the company in his field of operation and in making recommendations to the President for presentation to the Executive Committee.

ii. Evaluate the short-term plans of the divisions and staff departments to assure that they are adequate to attain established long-term goals.

iii. Participate with the other functional Vice Presidents in evaluating, each in his specific field of interest and activity, the results and developments so that all phases of company operations are in proper balance.

iv. Determine and eliminate points of interdivisional conflict by acting as coordinator in matters coming within his sphere of activity where plans or policies appear to jeopardize greater Monsanto's profitability or competitive position.

v. Keep abreast of the most progressive thinking and experience in his field, constantly study and arrange for use with-

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in the company of new and better methods of performing all aspects of the function assigned to him and keep the Executive Offices of the President informed of same.

vi. In cooperation with the Vice President - Personnel, promote standardization among the operating divisions and staff departments on policies relating to procurement, training and compensation of personnel in his sphere and evaluate the performance of such personnel.

vii. Approve budgets of departments on his staff and forward to Budget Committee and the President; also make recommendations to the Budget Committee and the President on company-wide budgets in his functional field.

viii. Review and report on those aspects of all appropriation requests which come within his sphere of activity.

ix. Have authority to approve requests for capital expenditures in his field not to exceed $100,000 each after consultation with the other members of the Executive Offices of the President and make recommendations on projects exceeding $100,000.

x. Resolve disagreements between divisions and staff departments in his sphere of interest and activity. Where suitable, several functional Vice Presidents may act jointly.

Chairman of the Board - Finance

The Chairman of the Board of Directors will act in place of a functional Vice President - Finance. His responsibilities, duties and relationships described below are only those concerned with the office of functional Vice President - Finance. The Treasurer and the Controller report to him and in his absence to the President. He is responsible for the following:

i. Forecast continually with the aid of the Accounting and Treasury Departments the company's and its subsidiaries' needs for new funds for two years ahead.

ii. Criticize in the light of the financial situation at any one time the value and necessity of the funds requested.

iii. Report to the Finance Committee such tested needs and plan with it the best method and timing of obtaining such funds.

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iv. Supervise all matters concerned with the raising of additional capital for the company.

Vice President - General Counsel

The functional Vice President - General Counsel is responsible for coordinating all legal and legislative matters of the company. He reports to the President, and the director of the Law Department reports to him.

In addition to the general duties of functional Vice Presidents, he is responsible for the following:

i. See that the divisions, departments and all other parts of management are advised on legal phases of their activities, present or proposed, and are informed on the effect of new laws, local, state or federal, on their business.

ii. Coordinate all company activities dealing with legislative subjects.

Vice President - Manufacturing

The functional Vice President - Manufacturing is responsible for coordinating all phases of manufacture of the company's products from raw materials to finished products delivered to the customer's plant. He reports to the President, and the following staff department heads report to him:

Director of Purchasing and Traffic

Director of Medical Department

Director of Personnel Relations - re labor relations

In addition to the general duties of functional Vice Presidents, he is responsible for the following:

i. Evaluate detailed manufacturing programs of the divisions. Determine whether they are adequate to meet prescribed sales goals and interdivisional requirements.

ii. Establish criteria on cost, quality and quantity product performance. Review and evaluate such performances, periodically resetting standards when necessary.

iii. Determine basic traffic and purchasing policies particularly with regard to inventories and prices.

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iv. Determine basic policies of the Medical Department and supervise its activities, where necessary consulting the Vice President - Personnel and the Vice President - Research, Development and Engineering.

v. Determine basic labor relations policies and supervise the activities of the Personnel Relations Department in this field.

vi. Call to the attention of the Vice President - Research, Development and Engineering new possibilities of development in the manufacturing field.

vii. Coordinate division engineering not of a developmental nature. In areas where there is an overlapping of activities with developmental engineering, resolve these differences case by case with the Vice President - Research, Development and Engineering.

Vice President - Marketing

The functional Vice President - Marketing is responsible for the company-wide development of sales programs and sales policies to maximize the long-term profitability of Monsanto's operations. He has the responsibility for coordinating all marketing activities, including advertising, within the company. He reports to the President, and the director of Advertising and Public Relations reports to him with respect to his advertising activities.

In addition to the general duties of functional Vice Presidents, he is responsible for the following:

i. Evaluate the detailed sales programs and budgets of the divisions and determine whether they are adequate to meet short-term sales goals and long-term sales objectives.

ii. Establish criteria of performance by which the effectiveness of marketing operations can be judged and periodically review performance against sales budgets, sales programs, competitive standings, share of market and other established criteria of sales performance.

iii. Capitalize on Monsanto's strengths in know-how, locations and sales position by guiding the divisions' sales programs toward more effective product integration and greater inter-divisional cooperation on sales.

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iv. Maintain surveillance over company-wide relations with principal customers, prospective customers, suppliers (in cooperation with the Vice President - Manufacturing), and all other major firms in the chemical and allied industries.

v. Determine basic advertising policies and review and approve the advertising and sales promotional activities needed to maintain company position, sales volume and create new profitable business. Through the director of Advertising and Public Relations, establish criteria to evaluate the advertising and sales promotion activities conducted by the divisions.

vi. Establish a market research service to advise on over-all marketing strategy, to assist and supplement activities in the divisions and to evaluate the marketing research effectiveness in the divisions.

vii. Coordinate activities of the company's sales offices.

Vice President - Personnel

The functional Vice President - Personnel is responsible for coordinating all phases of company personnel relations outside of the field of labor relations, and with this exception the director of the Personnel Relations Department reports to him. Included in his office and directly responsible to him are the manager of the Key Employment Development Program and the manager of Organization Planning. He reports to the President.

In addition to the general duties of functional Vice Presidents, he is responsible for the following:

i. Coordinate and evaluate all programs of selection, indoctrination and training of salaried personnel throughout the company.

ii. Approve all personnel changes bearing the following or comparable titles and above:

Plant manager
Assistant research director
Director of sales
Assistant manager of engineering
Assistant director of a staff department

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iii. Set up, develop and supervise organization planning, the process of defining and grouping the activities of the enterprise so that they may be most logically assigned and effectively executed.

iv. After discussion with the Executive Offices of the President, approve in advance changes in organization structure and title sufficiently important to be reflected in the charts in this MANAGEMENT GUIDE. Develop, amend and keep up-to-date the MANAGEMENT GUIDE.

v. Approve in advance procedure manuals issued by various components of the company in the light of policies contained in this MANAGEMENT GUIDE.

vi. Manage in his office certain specific programs:

a. Advanced Management Courses.

b. Academic Leaves of Absence.

c. Industrial Leaves of Absence.

d. Senior Scientist and similar programs.

e. Key Employe Development Program.

vii. Act as Chairman of the Retirement Plan Committee.

Vice President - Research, Development and Engineering

The functional Vice President - Research, Development and Engineering is responsible for coordinating the whole technical development of the company and for seeing that such development follows sound and integrated over-all plans and policies. He reports to the President.

In addition to the general duties of the functional Vice Presidents, he is responsible for the following:

i. Evaluate the research and developmental programs and budgets of the divisions and determine whether they are adequate to meet the short- and long-range goals for the company's technological development.

ii. Integrate such research, development and engineering plans of the divisions into a logical entity.

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iii. Measure the accomplishments of the divisions in his sphere by developing criteria of efficiency and effectiveness. To this end, maintain close contacts with cognate forces in all other major chemical concerns.

iv. Evaluate the activities, programs and budgets for the company's engineering research programs and also for the patent department, Research and Engineering Division.

v. Approve expenditures for educational purposes not otherwise provided for.

vi. In areas where there is an overlapping of interest between straight plant engineering and developmental engineering, resolve these differences case by case with the Vice President - Manufacturing.

vii. Approve all agreements relating to the purchase or sale of technical know-how and services with subsidiaries, associated and outside companies.

viii. Coordinate programs concerned with the Atomic Energy Commission.

(d) Meetings

Meetings of members of the Executive Offices will take place on call of the President.

Division general managers and staff department directors will have their semiannual meetings with the Executive Offices of the President on a schedule set by the President.

(e) Procedure

Requests for capital appropriations not exceeding $150,000 each will be sent in 13 copies to the Office of the President, attention Assistant to the President. He will direct the action copy of such request to that officer in whose sphere of influence it lies, and the information copies to the other members of the Executive Offices, at the same time, informing the applicant as to who has the action copy. Comments by members of the Executive Offices shall be returned to the Assistant to the President as soon as possible for transmittal to the responsible functional Vice President. Decisions on the matter will not be made until comments have

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been received from all members of the Executive Offices. At least a week should be allowed for these actions to take place after submission.

After consultation with his colleagues, decisions of the responsible functional Vice President will be issued to interested parties by the President. Appropriate semimonthly summaries of decisions in the Executive Offices will be made by the President to the Executive Committee and circulated to members of the Executive Offices, division general managers, Chairman of the Budget Committee and interested staff department directors.

Similarly, requests for capital appropriations in excess of $150,000 each will be forwarded in 16 copies to the Office of the President, attention Assistant to the President, for handling. Copies will be distributed by him in the Executive Offices. The functional Vice President in whose field of interest the matter lies shall transmit comments by other members of the Executive Offices with his recommendations to the Executive Committee. Decisions by the Executive Committee will be announced by the President to interested parties.

(f) Reports

By the 8th of each month, every division general manager and staff department director shall file with the Executive Offices of the President a report of his unit's activities and developments for the preceding month. Copies of such report will be sent to each member of the Executive Offices of the President, the Assistant to the President (four copies), the Chairman of the Finance Committee, each division general manager, the corporate Secretary, the Washington office and the Chairman of the Budget Committee.

(2) Regional Vice Presidents

Regional Vice Presidents may be appointed from time to time by the President. Their function is to fill the need for top-level company representation in the several geographical areas of the country. Since the appointment is based on the individual, successors to positions which have heretofore been held by a Regional Vice President may or may not be named as such by the President. Specific duties for Regional Vice Presidents and the person to

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whom they report vary with the assignments of the individuals and such duties and place in the organization structure are determined by the President at the time he makes the appointment.

(3) Staff Departments

General

Staff departments are the company's specialized expert units which are of service and guidance to:

(a) The top management or corporate level,

(b) The divisions, and

(c) Other staff departments.

Every staff department is functionally responsible to a member of the Executive Offices for the proper performance of that department's functions. Each such department shall assist the functional Vice President to whom it reports in the fulfillment of his responsibility for functional control, appraisal, service and coordination. There shall be only so many staff departments as the type and extent of the company's operations may from time to time require. Except as modified below, the existence of any such department must be justified on the basis that its function and activities can be carried out more efficiently, economically and logically in a centralized setup than by having responsibility for such activities distributed among the several divisions. On the other hand, a division shall be responsible for such activities only where they are of special interest or use to that division. There are seven staff departments.

Accounting Department

The Accounting Department is responsible to the Controller who reports to the Chairman - Finance, or in his absence to the President. Appropriate accounting personnel wherever located are responsible to the Controller. Those at plant locations must obey the rules and regulations of the local management.

The Accounting Department shall:

(a) Establish, with the approval of the Chairman - Finance and the Finance Committee, all accounting policies, procedures and practices for the company and supervise them.

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(b) Prepare and interpret all financial statements and reports, pointing out inefficiencies where developed.

(c) Assist the Law Department with preparation of registration statements for the Securities and Exchange Commission and prepare annual and monthly reports to same.

(d) Prepare income tax returns in conjunction with the Treasury Department.

(e) Approve financial data in statements to be given out for publication.

(f) Maintain continuous audit of accounts and records of the company wherever located and carry out a complete physical inventory at least twice a year.

(g) Make periodic checks of general cash funds and various payroll and cash funds. Approve cash disbursements.

(h) Cooperate with division management in preparation of estimates for capital expenditures, maintain adequate records of authorized appropriations, comparing actual against estimated expenditures, and prepare semiannual reports comparing actual new earnings with new earnings originally projected on new projects costing over $100,000.

(i) Prepare and disburse payrolls.

(j) Invoice shipments to customers, except from some of the branch offices by agreement with the marketing departments of the divisions.

(k) Cooperate with division general managers, staff department directors and Budget Committee in carrying out the budgetary control plan.

(l) Carry out all accounting relations with subsidiary and associated companies.

(m) Furnish such reports to the Board of Directors and all other units of the company as they may from time to time require.

Advertising and Public Relations Department

The director of the Advertising and Public Relations Department is responsible in his advertising activities to the functional Vice President - Marketing, and in his public relations activities to the President. In the advertising activity the members of the

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central advertising staff at St. Louis are directly responsible to that director. The divisional advertising managers are responsible to their respective directors of marketing for divisional advertising and are coordinated by the director of the Advertising and Public Relations Department.

The Advertising Department shall:

(a) Coordinate all advertising activities of the company and have complete responsibility for corporate advertising.

(b) Assist, advise and counsel divisional advertising departments where necessary.

(c) Prepare annual over-all advertising budgets with assistance of divisional directors of marketing and divisional advertising managers and submit them to the Vice-President - Marketing.

(d) Evaluate for the Vice President - Marketing all advertising programs and personnel.

(e) Work with advertising agencies and divisions in setting up and studying market surveys.

(f) Cooperate with the patent department of the Research and Engineering Division and the other divisions in obtaining and getting approval for tradenames and trade-marks.

All members of the public relations staff, wherever located, are responsible to the director of Advertising and Public Relations though they must be acceptable to and follow the rules of the local authorities.

The Public Relations Department shall:

(a) Be responsible for furnishing factual information on Monsanto to all public information outlets. It shall clear in advance with proper authorities all publicity sent out on Monsanto products, all speeches and prepared papers.

(b) Furnish advice and assistance to divisional or local plant management in the preparation and handling of releases of local news.

(c) Edit and publish MONSANTO MAGAZINE.

(d) Assist the President in the preparation of messages to and answering inquiries from the stockholders and the public.

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(e) Keep the President, as the chief public relations officer of the company, informed on such matters as will enable him to carry out these responsibilities.

Law Department

The director of the Law Department has charge of all legal matters and reports to the functional Vice President - General Counsel. He is also Secretary of the company. All outside attorneys, except for patents and trade-marks, shall be employed by the Law Department.

The Law Department shall:

(a) Handle all legal and legislative matters not otherwise specifically assigned.

(b) Advise with appropriate departments and divisions on such matters as:

i. Sales contracts.

ii. Third-party contracts and agreements.

iii. Labeling requirements.

iv. Purchase contracts over $10,000.

v. Forms of licensing arrangements.

vi. Tax questions and returns.

vii. Anti-trust and fair trade practices matters.

(c) Handle:

i. All court cases.

ii. Federal Trade Commission matters.

iii. Acquisition of new businesses and corporations.

iv. Formation and liquidation of subsidiaries.

v. Charter amendments, new issues of securities, including SEC registration statements, supervise work of transfer agent and registrar for all classes of stock, supervise transactions with New York Stock Exchange in connection with stock of the company.

vi. Garnishment and assignment of wages of employes at Queeny, Krummrich and Carondelet plants.

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vii. All functions of Secretary of the company including preparation of notices and resolutions, and keep minutes of directors' and stockholders' meetings and correspondence with stockholders on corporate matters.

Medical Department

The director of the Medical Department has general charge of all medical activities of the company and reports to the functional Vice President - Manufacturing. He approves choice of medical officers at divisional locations but they are responsible to divisional management.

The Medical Department shall:

(a) Standardize and carry out medical practices throughout the company and keep them up-to-date.

(b) Obtain and disseminate toxicological data on the company's products and have charge of all outside work in this field.

(c) Clear in advance any material to be published on toxicological phases of Monsanto's products.

(d) Follow legislation on medical matters in cooperation with the General Counsel or the Law Department.

(e) Make regular industrial hygiene inspections of the various plants and submit reports to divisional and plant management.

(f) Coordinate the air and stream pollution aspects of waste disposal activities.

Personnel Relations Department

The director of the Personnel Relations Department is responsible for coordination and general assistance in all areas of personnel management. (The term "personnel management" includes industrial, labor, employe and personnel relations, as well as any other terms used to identify relationships between the company, employes and trade unions.) He reports on labor relations to the functional Vice President - Manufacturing, and on all other personnel matters to the functional Vice President - Personnel.

The Personnel Relations Department shall:

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(a) Plan and participate in determination of personnel policies and practices with authority to establish uniform interpretation.

(b) Assist the divisions and staff departments by providing advice, counsel and guidance in all areas of personnel management. The department will also assist in the selection, placement and development of staff employes doing personnel work wherever they may be used or needed throughout the company.

(c) Coordinate its activities with the Law, Medical and Advertising and Public Relations Departments, especially insofar as its activities impinge upon the fields of activity of those groups.

(d) Administer company-wide, the pension plan, group insurance plan, salary plan, service awards, plant inspection, college recruitment and similar matters affecting employe compensation, benefits or practices.

(e) Be responsible for the operation of a central office personnel department and an office services department which shall operate the St. Louis offices and act as staff adviser to the other offices of the company.

(f) Assist the Executive Offices of the President in respect to such matters as charitable contributions, employe housing, salary and other compensation matters, and by special request or assignment.

(g) Study and recommend improved techniques in personnel management and recommend solutions to anticipated problems.

Purchasing and Traffic Department

The director of the Purchasing and Traffic Department is responsible for the purchasing and movement of all goods, materials and supplies. He reports to the Vice President - Manufacturing. Appropriate local purchasing and traffic agents as well as the central purchasing and traffic staff report to him. The divisions may appoint a liaison officer.

The Purchasing and Traffic Department shall:

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(a) Purchase all goods, materials and supplies and have same available at proper points at times and in quantities agreed upon with the respective divisions.

(b) Submit to the Law Department for review all contracts involving $10,000 or more.

(c) Submit to the Vice President - Manufacturing for approval all contracts which involve $100,000 or more, or a term of more than one year, or a provision for liquidated damages or penalties, or which lack a price protection clause.

(d) Develop new sources of supply, substitute raw materials, price trend and future availability studies - tying in closely with the divisions.

(e) Supervise movement of incoming material, outgoing products and passenger transportation of company travelers. Study rates and routes for optimum economy.

(f) Be responsible for development of packages which provide safe and economical transportation of all products and comply with specifications set up by the various regulatory bodies.

(g) Keep various units of the company informed on all labeling regulations and related federal, state and municipal laws, and supervise the divisions' compliance with them.

Treasury Department

The Treasurer, as head of the Treasury Department, is responsible for the general handling of company funds except where otherwise specified. He reports to the Chairman - Finance or in his absence to the President. Local credit managers report to the Treasurer.

The Treasury Department shall:

(a) Assure safe custody of corporate funds, notes and securities, and maintain adequate and safe bank accounts.

(b) Disburse funds as authorized by vouchers approved by the Controller.

(c) Invest funds as directed by the Finance Committee.

(d) Be responsible for tax matters, including the filing of tax

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returns. Problems involving tax law or legislation will be coordinated with the Law Department.

(e) Control all insurance activities except group insurance, collaborating where suitable with the engineering department of the Research and Engineering Division, the Personnel Relations Department and the Overseas Division.

(f) Be responsible with the Retirement Pension Plan Committee for the functioning and administration of the financial sections of the plan.

(g) Have company-wide responsibility for credits and collections.

(h) Administer the employe Stock Purchase Plan.

(4) Secretary, Treasurer and Controller

(a) Secretary

The Secretary shall attend all meetings of the Board of Directors and of the stockholders. He shall record all votes and the minutes of all proceedings in a book to be kept for that purpose; and shall perform like duties for standing committees when required. He shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors and shall perform such other duties as may be prescribed by the board or President, under whose supervision he shall be. He shall keep in safe custody the seal of the company and when authorized by the board, or proper committee or President or Vice President, affix the same to any instrument requiring it, and when so affixed, it shall be attested by his signature or by the signature of an assistant secretary.

(b) Treasurer

The Treasurer shall have the custody of the funds and securities of the company and shall deposit all moneys and other valuable effects in the name and to the credit of the company in such depositories as may be designated by the Board of Directors. He shall disburse the company's funds when properly authorized by vouchers prepared and approved by the Controller, and shall invest funds of the company when approved by the Board of Directors or the Finance Committee. He shall render to the President and Board of Directors, whenever they may require it, an

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account of all his transactions as Treasurer. If required by the Board of Directors, he shall give the company a bond in such sum, and with such surety or sureties as shall be satisfactory to the board, for the faithful performance of the duties of his office, and for the restoration to the company, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the company.

(c) Controller

The Controller shall be the principal officer in charge of the accounts of the company and shall keep full and accurate accounts of receipts and disbursements in books belonging to the company. He shall render to the President and Board of Directors, whenever they may require it, an account of all of his transactions as Controller and of the financial condition of the company, and shall perform such other duties as shall from time to time be assigned to him by the Board of Directors or the President. If required by the board, he shall give the company a bond in such sum and with such surety or sureties as shall be satisfactory to the board for the faithful performance of the duties of his office.

(5) Washington Office

The manager of the Washington office is charged with liaison with departments of the U. S. Government, and others in the Washington, D. C., area, in matters which are referred to him by various parts of the company. He will maintain such contacts with the Government as are necessary for Monsanto's interests.

He shall be apprised in advance of contacts which other personnel of the company make with the Government in those areas in which he is active or has an interest. This rule does not apply to routine sales.

He reports to the President.

C. Operating Area

(1) Divisions

A division is a unit of the company headed by a Vice President as general manager who reports to the President. Manufacturing

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divisions have four main departments: production, marketing, research and engineering, the directors of which report to the general manager. Divisions with no manufacturing facilities may have organizations tailored to their needs (see chart section). The object of a division is to make as large a return on its operating investment as possible, consistent with good long-range management with the policies of the company.

There are six divisions:

Inorganic Chemicals
Organic Chemicals
Plastics
} Manufacturing and selling products

Merchandising — Processing and selling products

Overseas — Selling products and know-how overseas and managing overseas investment

Research and Engineering — Researching, developing and selling know-how and buying know-how overseas.

The differentiation between the three manufacturing divisions is based on product lines, and while these fit the chemical nomenclature in most cases, the product line is the ultimate criterion, e.g., the Inorganic Chemicals Division sells synthetic detergents even though they are organic in nature because detergents are one of its product lines. Exceptions may be made also in some cases of by-products. Allocation of a product or product line to a division will be made by the President.

There is no limit to the size or assets of a division as long as it confines itself to its assigned fields of operation described below.

Since the demarcation of divisions is by product lines and not by history or geography, two or more divisions may operate in the same location. The manufacturing investment of any given product line may be wholly- or only partly-owned by the guest division, which is responsible for any idle plant charges on its share and receives goods at cost up to the extent of its percentage asset participation. In a divided ownership installation, any excess goods not used by the guest division will be sold as far as possible by the operating division at a commission agreed on by the interested general managers. The location as a whole is managed by

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one division, and the plant manager is responsible only to the production or general manager of his own division.

Superintendents of guest division investments in a jointly-owned plant are employes of and subject to the orders of the guest division but must conform to local ground rules. Arrangements for joint plants will be made by the general managers concerned depending on the circumstances which are likely to vary, depending on the proportion of division and degree of integration but subject to approval of the President.

(a) Inorganic Chemicals Division

The Inorganic Chemicals Division is responsible for all inorganic products with a few agreed exceptions. It operates plants at Carondelet, Missouri; Camden, New Jersey; Everett, Massachusetts; Kearny, New Jersey; Monsanto, Tennessee; Monsanto, Idaho; Trenton, Michigan; and has manufacturing facilities at Avon, California; Monsanto, Illinois and Nitro, West Virginia.

(b) Organic Chemicals Division

The Organic Chemicals Division is responsible for all organic chemicals with a few agreed exceptions. It operates plants at Anniston, Alabama; St. Louis, Missouri; Monsanto, Illinois; Nitro, West Virginia; Norfolk, Virginia; Avon, California; and has manufacturing facilities at Everett, Massachusetts; Seattle, Washington and Texas City, Texas.

(c) Plastics Division

The Plastics Division is responsible for all monomers and polymers entering into or ordinarily classified as plastics or elastomers, with the exception of some by-product resins produced by the Organic Chemicals Division. It operates plants at Springfield, Massachusetts; Port Plastics, Ohio; Texas City, Texas; Seattle, Washington; Santa Clara, California and Long Beach, California; and has manufacturing facilities at Everett, Massachusetts.

(d) Merchandising Division

The Merchandising Division is responsible for all products sold to the retail consumer under Monsanto's name. While such products are made preferably from Monsanto materials, they need

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not necessarily be so in whole or in part where they fit profitably a presently utilized merchandising outlet. It operates a processing plant at Columbus, Ohio.

(e) Overseas Division

The Overseas Division is responsible for foreign sales of the company's products and know-how and for supervision and development of all other foreign commercial activities and investments in close cooperation and agreement with the affected domestic divisions, staff departments and the Executive Offices of the President.

Projects for new or additional investments and for financing sales of know-how outside the U.S.A., with the agreement of the domestic division involved, are handled with the Executive Offices of the President in the same manner as appropriation requests. In case of purchases or sales of technical know-how or services abroad, the heads of agreement and final contract must be reviewed by the Law Department and patent department, Research and Engineering Division and approved by the manufacturing division, Overseas Division and the functional Vice President - Research, Development and Engineering, before final action.

Prices for foreign sales are determined by agreement with the domestic producing division. Profits are credited to the domestic divisions on the basis of the goods supplied. Likewise, royalties received from foreign subsidiaries or other companies after deduction of necessary expenses are credited to the division which supplied the information.

(f) Research and Engineering Division

The Research and Engineering Division shares with the divisional research and engineering forces the responsibility for the forward development of the company. It is concerned particularly with new technical lines of endeavor in new products and new engineering techniques not closely allied to present ones. The latter are largely the responsibility of the cognate divisional groups. The division may from time to time organize and operate special project groups directly under the direction of the assistant general manager.

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i. Chemical Research

The chemical research department operates the Chemical Research Laboratory at Dayton, Ohio. Here, basic research is carried out both independently and in close relationship to the divisions. The problems are those in new fields or in those areas less closely related to divisional programs.

ii. Development

The development department is responsible for making technical contacts and bringing to the company new product and engineering possibilities from both the U.S.A. and abroad. It is the chief agent for purchasing know-how and inventions, whereas the Overseas Division is the chief agent for selling Monsanto know-how. Each department keeps the other closely informed on its activities in these related fields.

iii. Engineering Department

The engineering department will help other divisions or staff departments on request. It will cooperate with the Treasury Department on insurance, as per pages 25 and 82-84. In addition, it will furnish engineering on the Research and Engineering Division's projects until such time as they are taken over entirely by another unit of the company. It will work out with the other departments of the division and then carry out a program of engineering research.

iv. Patent Department

The patent department is responsible for the preparation, prosecution and defense of all patents, trade-marks, trade names and copyrights. In conjunction with the Law Department, it will prepare contracts and licenses incident to such rights and to technical information, whether they are being acquired or conveyed. The approval of this department must be obtained before any technical information is published or given out.

v. Engineering Sales Department

The engineering sales department is responsible for sales of catalysts, plants for sulfuric acid, chlorine, recovery of sludge acid and such others as may be developed in the future.

Such members of the division as are resident at plants or offices outside St. Louis are responsible to the appropriate Research and

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Engineering Division's department director and are carried on his budget, but must be approved by the local management and operate under the general rules of the location.

(2) Subsidiaries and Affiliated Companies

(a) Subsidiaries

i. Wholly-owned

Monsanto Overseas, S.A.:

A Panama corporation operated by the Overseas Division. It sells company products abroad, licenses patents and know-how and holds investments in foreign countries.

Monsanto Export Company:

A Western Hemisphere trade corporation, operated by the Overseas Division, it functions as seller of Monsanto products from domestic plants to all territories in the Western Hemisphere excepting the United States, Puerto Rico, Alaska and the Territory of Hawaii.

Monsanto Mexicana, S.A.:

A Mexican corporation, it has a plant at Lecheria (near Mexico City), Mexico, for the production of Lustrex, polyvinyl chloride compounds and cellulose acetate molding compounds.

Monsanto Argentina, S.A.I.C.

A trading company organized to sell in Argentina products for Monsanto affiliated and associated companies.

Monsanto Overseas Corporation:

Inactive.

Nealco-Monsanto Company:

Inactive.

ii. Partly-owned

Monsanto Canada Limited:

A Canadian corporation operating plants in Montreal, Vancouver, and (through its subsidiary, Monsanto Oakville Limited) in Oakville, Ontario. It makes chemicals, plastics and glues.

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Monsanto Chemicals (Australia) Limited:

A jointly-owned subsidiary of Monsanto Chemicals Limited (England) and Monsanto Chemical Company, U.S.A., it operates plants in Melbourne and Brisbane. Its products are mainly those Monsanto materials which can be more economically manufactured in Australia.

Monsanto Chemicals Limited (England):

An English corporation which operates plants at Ruabon, North Wales, and Newport, England. While it has products of indigenous origin, a large part are those Monsanto materials which can be more economically manufactured in England.

Monsanto-Atanor Industrias Quimicas Argentinas, S. A.:

An Argentine corporation manufacturing phenolic resins, phenolic molding compounds and urea specialty resins, jointly owned with Atanor Compania Nacional para la Industria Quimica S. A. Mixta.

(b) Affiliated Companies

Partly-owned but not controlled

The Chemstrand Corporation:

A Delaware corporation formed and owned jointly with American Viscose Corporation for the development and manufacture of certain new classes of synthetic fibers, primarily nylon and acrylics.

Societe Monsanto-Boussois:

A French corporation which operates a plant in France for the manufacture of polystyrene.

Monsanto Chemicals of India Limited:

An Indian corporation jointly-owned by Monsanto Chemical Company and Monsanto Chemicals Limited (England). Its activities are the handling of sales within India of Monsanto products produced in the United States, England, Canada and Australia.

Monsanto-Kasei Kogyo, K.K.:

A Japanese corporation which operates two plants for the manufacture of plastics and plasticizers in Japan. The

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other shareholder is the Mitsubishi Chemical Industries, Ltd.

Shawinigan Resins Corporation:

A Massachusetts corporation jointly-owned and operated by the Plastics Division of Monsanto Chemical Company and Shawinigan Products Corporation (N. Y.) for the manufacture of resins and resin emulsions.

Mobay Chemical Company:

A Delaware corporation owned jointly with Farbenfabriken Bayer, A.G., of Germany for the development and manufacture of isocyanates and polyesters for sale and ultimate use in solid and rigid foams, solid rubber-like materials, surface coatings and adhesives.

Societa Industrie Chimiche Edison:

An Italian corporation with a plant in Italy manufacturing vinyl chloride monomer and polyvinyl chloride resins and compounds.

Societe des Produits Chimiques Coignet:

A French corporation with plants in France for the manufacture of phosphorus and phosphates.

Societe Industrielle de la Cellulose (Sidac):

A Belgium corporation having plants in Belgium. It is interested primarily in plastics.

A/B Casco:

A Swedish corporation, it has plants in Sweden and is interested in adhesives.

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IV. GENERAL DUTIES OF AN EXECUTIVE

The following apply to any executive within the limits of his authority and consistent with his relationships. He shall:

(1) Support company policies and procedures once they have been decided and see that his subordinates do likewise.

(2) Delegate authority and responsibility in accordance with the charts and this MANAGEMENT GUIDE, follow procedures therein and recommend changes in them to the Vice President - Personnel.

(3) Strive constantly to reduce costs and keep up-to-date on all possible ways and means of doing so.

(4) Endeavor to perfect himself in the knowledge of human relations and to apply that knowledge at all points.

(5) Train successors in his group, periodically interview members of his organization, rate them and report thereon to his superiors.

(6) Approve expenditures in his division, department or section within the budget laid down by management.

(7) Keep his superior informed on any matters for which the superior is held responsible and of which he should know.

(8) Take on additional duties as required by his superiors even though not specified in the MANAGEMENT GUIDE.

(9) Constantly analyze and appraise results in his unit and develop plans for improvement.

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V. POSITIONAL ACTIVITIES

A. General Manager

The general manager of a division is appointed by the President after approval by the Board of Directors and his election by it as Vice President. He is responsible to the President. Responsible to him in the manufacturing divisions are the directors of production, marketing, research and engineering. In the non-manufacturing divisions, a director for each main section is responsible to the general manager.
The general manager shall:

(1) Operate his division efficiently and with as high a percentage return on operating investment before taxes as possible, approve all divisional quotas and budgets and expenditures within them.

(2) Prepare and supply to the Budget Committee all necessary data required for budgetary control.

(3) Have authority to make capital expenditures for (i) new projects, (ii) replacements, (iii) each overrun, or (iv) each change in scope, at a maximum of $25,000 per project and in a maximum amount per month averaged over the calendar year of:

Inorganic Chemicals Division	$150,000
Organic Chemicals Division	150,000
Plastics Division	150,000
Merchandising Division	50,000
Research and Engineering Division	50,000

He may decide to whom in his division he may delegate part or all of this authority.

All requests beyond his authority shall be submitted to the Executive Offices of the President as prescribed above.

(4) Have authority, with power of delegation, to sign sales contracts covering products of his division for such prices and terms of payment as he may fix and under conditions and forms approved by the Law Department. Export prices will be set in cooperation with the Overseas Division.

(5) Prescribe such reports from within his division as he deems necessary and report by the 8th of each month to the Execu-

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tive Offices of the President, including the Assistant to the President (four copies), a summary of the activity of the division with copies to Chairman, Finance Committee; general managers; corporate Secretary; Washington office and Chairman of the Budget Committee. Send copies of research reports to the directors of research and development of the divisions, to the director of the patent department, Research and Engineering Division and to the Vice President - Research, Development and Engineering.

(6) Direct the efforts of the employes in his division, with continuous attention to human relations. He shall be responsible for all phases of personnel administration as related to such employes within the scope of established company policies and shall coordinate all such activities, including labor relations, in cooperation with the Personnel Relations Department.

(7) Report by March 1 each year (one copy only) to the Vice President - Personnel on the status of manpower replacement charts and on appraisal interviews on those in the Key Employe Development Program.

(8) Follow and enforce the procedures for transfer prices of products between divisions, as laid down in handbook on such procedures by the Controller, dated March 5, 1954, as amended. Disagreements shall be brought to the attention of the functional Vice Presidents for Manufacturing and Marketing.

(9) Approve giving to foreign subsidiaries Class C (preliminary) information when requested and approved by the Overseas Division, and Class B (full) information when approved by the Overseas Division and the functional Vice President - Research, Development and Engineering.

(10) Approve and have approved by the Overseas Division and the functional Vice President - Research, Development and Engineering, with clearance from the Law Department and the patent department, Research and Engineering Division, before final action is taken, all heads of agreement and final contracts for sale of services and technology abroad.

(11) Negotiate purchases of technical know-how and services abroad in cooperation with the Research and Engineering

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Division, keeping the Overseas Division completely informed and getting approval of the functional Vice President - Research, Development and Engineering before final action.

(12) Maintain constant long-range planning programs to improve present products and to develop new ones and new processes.

(13) Make a semiannual report to the Executive Committee of his division's activities and plans.

B. Production Manager

The production manager is appointed by the general manager with the approval of the functional Vice President - Manufacturing and is responsible to the general manager. Divisional plant managers report directly to the production manager.

The production manager shall:

(1) Take every possible means to keep costs at the lowest level, improve production techniques and plan new production developments, working closely with research and development directors.

(2) Maintain the budget set by divisional management and improve upon it wherever possible.

(3) Authorize capital expenditures within such limits as are prescribed by the general manager.

(4) Regulate production to the needs of sales and inventory, keeping the latter as low as safely possible.

(5) Be responsible for direct handling of labor relations and personnel in the plants in close cooperation with the plant managers and the Personnel Relations Department.

C. Director of Marketing

The director of marketing is appointed by the general manager with the approval of the functional Vice President - Marketing and is responsible to the general manager. Divisional directors of sales report directly to the director of marketing.

The director of marketing shall:

(1) Attain maximum sales at best possible prices consistent with good long-range operation of the division's products.

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(2) Consult with the production manager so that production rates and inventories may be geared as closely as possible to actual sales needs.

(3) Set sales quotas for his division with the approval of the general manager and see that they are attained or exceeded.

(4) Approve sales expenditures within the limits of his departmental budget.

(5) Work with the patent department and research director on questions of patents, trade secrets, trade-marks and trade names.

(6) Approve advertising copy, insofar as factual information is concerned, calling on any section of the company for assistance.

(7) Discuss with the director of Advertising and Public Relations Department advertising and promotional plans, present and future, together with divisional budgets and be responsible for carrying out plans and maintaining budgets as agreed on.

(8) Render service and advice on technical sales matters within the company and to customers, handle complaints and inquiries concerning same.

D. Director of Research

The director of research is appointed by the general manager with the approval of the functional Vice President - Research, Development and Engineering, and is responsible to the general manager. Divisional associate and assistant directors, and in the case of the Organic Chemicals Division the development director, report to the director of research.

The director of research shall:

(1) Improve constantly by research present products and processes; bring out new products and develop processes for them; through pilot plant operation, supply engineering with data for design and construction and supply commercial development or sales sample quantities for testing and carrying out application work.

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(2) Plan proportions of budgetary allowance to be spent on the above categories and approve expenditure within the budget established by the general manager.

(3) Facilitate utilization of products of other divisions as raw materials in his division, particularly where excess capacity is available.

(4) Notify, in summary form, all research directors and the directors of the chemical research, patent and general development departments, Research and Engineering Division, on final reports completed in his laboratories.

(5) By studying technical literature and through technical contacts, develop new possibilities for manufacture or use.

Work on products of another division must not be inaugurated until cleared by the general manager concerned or, failing agreement, with the functional Vice President - Research, Devlopment and Engineering.

E. Development Director

The development director is appointed by the general manager with the approval of the functional Vice President Research, Development and Engineering and reports in different divisions as follows:

Inorganic Chemicals	— Director of engineering and development
Organic Chemicals	— Director of research
Plastics - (1) Product	— Director of marketing
- (2) Research	— Director of research
Merchandising	— General manager
Overseas	— General manager
Research and Engineering	— General manager

In the Overseas Division, the development director is responsible primarily for the development of the various overseas subsidiaries in all their phases and for the study and recommendation of new projects to be entered into either with present subsidiaries or allied companies or under completely new conditions.

In the Research and Engineering Division, the director of the development department is responsible for keeping the company informed on

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new processes, products, applications and ideas from outside which may be of value in further investigating those agreed upon until a decision is made to have further follow-up conducted by another unit of the company.

The other development directors have responsibility for commercial chemical development and technical service with degrees of emphasis indicated by the varying lines of organization.

In general the development director shall:

(1) Establish new uses for old or new products with sufficient customers to make certain of their value and methods of use, then turn the product over to the sales department.

(2) Develop with the research department new products to satisfy existing new demands, solve new problems or improve old solutions.

(3) As instructed by the general manager, render service and advice on technical matters within the company and to consumers, handle complaints and technical inquiries.

(4) Maintain close contact with the chemical and chemical-consuming industries to foresee trends, new possibilities, make market surveys.

F. Director of Engineering

The director of engineering in a manufacturing division is appointed by the general manager with the approval of the functional Vice President - Manufacturing, and is responsible to the general manager. Responsible to him are the associate and assistant directors of engineering.

Such director of engineering shall:

(1) Handle studies for and construction of plant expansion requirements and improvements in plant processes.

(2) Cooperate with and exercise budgetary control over outside engineering and construction firms when they are being employed.

(3) Work closely with the Research and Engineering Division on any divisional projects assigned to them and where agreed upon, work on engineering research projects set up by the Research and Engineering Division.

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The director of the engineering department, Research and Engineering Division, is appointed by the general manager of that division with the approval of the functional Vice President - Research, Development and Engineering, and is responsible to such general manager.

He shall:

(1) Do process engineering research, supported by fundamental engineering research, to investigate the application of new equipment and engineering techniques to new and existing processes.

(2) Provide all types of engineering consulting services as required.

(3) Direct the design and construction of new facilities, evaluation of new processes, new equipment or new enterprises and plant site studies, as requested.

(4) Maintain a program of governmental, academic and industrial contacts, both here and abroad, to keep the company informed of engineering advances.

(5) Organize and operate, whenever economical or advisable, facilities for the manufacture of equipment items for use in the company's operations, and when advisable create an organization to construct chemical plant facilities for the company or for its customers.

(6) Create a Monsanto disaster emergency plan in consultation with pertinent divisional and departmental personnel.

(7) Collaborate with research, development and other technical departments in the training and development of the company's engineering personnel.

G. Director of Staff Department

The director of a staff department is appointed by the President after consultation with the appropriate functional Vice Presdent. He is responsible to a member of the Executive Offices of the President, as stated in the departmental section of this MANAGEMENT GUIDE, and is on his staff.

A staff department director shall:

(1) Prepare over-all plans and company policies in his field of activity for approval and adoption.

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(2) Advise and assist all elements of the company in the field of his department without line authority over any but the official members of his department.

(3) Prepare and supply to the Budget Committee all necessary data for budgetary control.

(4) Undertake such special assignments as may be given to him by the Board of Directors, Executive or Finance Committee or members of the Executive Offices of the President.

(5) Approve expenditures in his department within the budget assigned.

(6) Report by the 8th of each month to the Executive Offices of the President, including the Assistant to the President (four copies), the Chairman of the Finance Committee, each division general manager, the corporate Secretary, the Washington office and the Chairman of the Budget Committee, on the activities of his department.

(7) Handle personnel in his department in accordance with the established company policies. Report by March 1, each year (one copy only) to the Vice President - Personnel on the status of manpower replacement charts and on appraisal interviews of those in the Key Employe Development Program.

(8) Make a semiannual report to the Executive Committee of his department's activities and plans.

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POLICIES AND PROCEDURES

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VI. POLICIES AND PROCEDURES

A. Committees and Meetings

(1) Stockholders' Meetings

The annual meeting of stockholders is held on the second Thursday of April in each year if not a legal holiday and, if a legal holiday, then on the next secular day following, at 10:00 AM when they elect by a plurality vote, by ballot, a Board of Directors, and transact such other business as may be properly brought before the meeting. The Chairman of the Board presides and, in his absence, the President.

(2) Committees

The Executive and Finance Committees are the over-all permanent committees set up by the Board of Directors, but there are several others formed by the board, the Executive Committee or the President for special purposes. These are described elsewhere and are:

Auditing Committee

Bonus Committee

Budget Committee

Housing Committee

Retirement Plan Committee

Salary Committee

Stock Option Committee

Whereas committees are, in general, frowned upon, any division general manager or staff department director may set up such committees within his unit as he feels necessary; and interdivisional functional committees may be called to meet by the appropriate functional Vice President whenever he feels there is a need. No meetings should be held for the sake of schedule or unless there is sufficient and important matter for discussion.

The Auditing Committee, composed of non-officer members of the board, studies and makes recommendations on auditing policies and practices and recommends yearly to the board on the choice of independent auditors.

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B. Branch Offices

General branch managers shall be those representatives of the division doing the largest volume of business through any single branch office but, once established, changes based upon varying respective volumes shall be made only by mutual consent of division managers affected and the functional Vice President - Marketing.

Wherever possible in a given city or town, multiple branch offices will be in a single location.

Each district branch office manager reports to his divisional director of marketing or his deputy.

Each branch office shall have an office manager responsible for all details of office management and the broad company policies affecting the personnel domiciled in the office. The office manager shall be responsible to the general branch manager for the conduct of his work. He shall receive direction from and be responsible to the functional Vice President - Marketing on matters of general policy and procedure relating to office management. Where the duties of the office manager do not require a full-time man, the duties shall be assigned to a junior member of the office sales force or a senior secretary on a part-time basis. The office manager shall be appointed by mutual consent of the general branch manager and the functional Vice President - Marketing.

The contact of the field personnel will be exclusively with and through the divisional branch managers (except as provided below) who will report directly to the directors of marketing, or their designates, of the various divisions concerned and be responsible to them for the maintenance of contact with customers and prospects, accomplishment of sales budgets and all other activities appertaining to sales of products of the various divisions.

Sales development and technical service personnel, when in a branch office territory, shall inform the branch manager of the division with whose field personnel they may be working, of their presence in the territory and the contacts they propose to make in order that he will be officially informed of activity within his area.

C. Expenditures

(1) Appropriation Requests

The mechanism of handling appropriation requests will fe found under "Executive Offices of the President" and "Executive Com-

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mittee." Requests for capital appropriations for (a) new projects, (b) replacements, (c) each overrun, or (d) each change in scope, requiring approval of the Executive Offices of the President and/or Executive Committee or the Board of Directors shall follow the general outline indicated on the succeeding pages.

Whenever it appears that an overrun or change in scope will require additional funds beyond the amount approved and beyond the authority of the general manager, and a supplemental request for the additional amount is made, it shall be on the same form and should recite briefly the points covered in the original request and then explain the reasons for requesting additional funds. If the original authorization was approved by the board, 20 copies of the new request should be submitted so that the Executive Committee may refer the matter to the board if it wishes, or if more than $250,000 is sought.

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FORM:

MONSANTO CHEMICAL COMPANY

TO THE EXECUTIVE OFFICES OF THE PRESIDENT:

Messrs. _____ President _____

_____ _____

_____ _____

_____ _____

_____ _____ Secretary

_____DIVISION REQUEST NO. _____

_____PLANT BUDGET NO. _____

FOR:_____

(Insert descriptive title)

APPROPRIATION REQUESTED $_____

_____, 195__

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APPROPRIATION REQUESTED $_____

ESTIMATED ANNUAL NEW EARNINGS

Gross Profits / Savings Before Depreciation $_____

Less Depreciation _____

$_____

Gross Profits / Savings After Depreciation $_____

Net Before Taxes _____

Net After Taxes _____

ESTIMATED RETURN ON INVESTMENT

	On $____ New Fixed Capital Item I	On $____ Total Fixed Capital Item II	On $_____ Total Fixed & Working Capital Item IV
Gross After Depreciation	_____%	_____%	_____%
Net Before Taxes	_____%	_____%	_____%
Net After Taxes	_____%	_____%	_____%

A partial breakdown of the estimate of capital requirements and new earnings is given on the next page.

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ESTIMATE OF CAPITAL REQUIREMENTS

I. New Property to be Installed:

Manufacturing Buildings	$_____
Non-Manufacturing Buildings	_____
Manufacturing M. & E.	_____
Non-Manufacturing M. & E.	_____
New Fixed Capital	$_____

II. Value of New Fixed Capital (as above) and Proportionate Value of Existing Property to be Utilized:

Mfg. Facilities for End Products	$_____
Mfg. Facilities for Intermediate Products	_____
Steam Generation & Distribution	_____
Electric Generation & Distribution	_____
Other Non-Mfg. Facilities	_____
Total Fixed Capital	$_____

III. Working Capital Required:

Raw Material Inventory at Cost	$_____
Goods in Process at Cost	_____
Finished Product Inventory at Cost	_____
All Other Items at 15% of Annual Sales	_____
Total Working Capital	$_____

IV. Total Fixed and Working Capital (II Plus III) $_____

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ESTIMATE OF ANNUAL NEW EARNINGS

I. Annual Net Sales: ____# at ____ cts./# $_____

II. Deduct:

Cost of Manufacturing $_____

Cost of Packing & Shipping _____

Total Annual Operating Cost $_____

III. Gross Profit Savings $_____

IV. Deduct:

Selling, Administrative & Research

Expense at ____% of Net Sales $_____

V. Net Savings Income (Before Income Taxes) $_____

VI. Deduct:

Normal Income Taxes at 50%* of Net Income $_____

VII. New Savings Earnings (After Income Taxes) $_____

*This figure will vary according to tax laws.

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DESCRIPTION OF PROJECT

This project contemplates the_____
(Insert a brief, specific description)

NEED FOR PROJECT

(Indicate the need of this project with reference to existing capacities and estimated future sales or other requirements.)

STATUS OF PROJECT

(Indicate the status of research and design, and state when construction work can be started, how it will be handled and when it will be finished.)

DISCUSSION OF ESTIMATES

Sales

(Present your forecast of estimated volume of sales and estimated sales prices. Where the request covers the erection of a new plant or an expansion of an existing plant, your forecast should be accompanied by a complete presentation of the facts on which your forecast is based, as for instance, market analyses, charts and graphs which have been prepared in connection with the forecast and sources of information on which you have relied in preparing your forecast.)

Cost of Manufacture

(Present your forecast of estimated cost of manufacture used in the calculation of estimated new earnings.)

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Cost of Construction

(Present your forecast of estimated cost of construction not as of the date of submitting the request but as it actually will be incurred, i.e., if the construction is to be completed during a two-year period, use cost which it is estimated, based upon your experience and knowledge regarding the trend of costs, will have to be paid during such two-year period. Where the request covers the erection of a new plant or expansion of an existing plant, your forecast should be accompanied by the best available data on the trend of the costs involved.)

Technical Personnel

(Mention number of new technical personnel which will have to be brought into the division or department for this project.)

Miscellaneous

(Discuss the effect of the project covered by the request on the related manufacturing operations and on the reserve capacity of existing utilities and other non-manufacturing facilities. Call attention to the amount of existing property which will become obsolete and the amount of idle property that will be returned to use as the result of the project.)

ALTERNATE COURSE

(Give your recommendation of the alternate course to be followed, if approval of the project is held up for:

(a) a short period

(b) an indefinite period.)

RECOMMENDATION

The _____ Division recommends the expenditure of $_____ for undertaking this project and requests authority to proceed on that basis.

_____

General Manager

Confidential information for use in appropriation request forms will be found in the pocket inside the back cover.

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(2) Budget Committee

The Budget Committee, appointed by the President, will assist him in coordinating and preparing the over-all budget of the company, carrying out the budgetary control plan, setting up standards, studying procedures, analyzing results and such other budget matters as he may desire. The Budget Committee consists of the President, the Controller and an Assistant to the President who serves as Chairman.

(3) Budgetary Control Plan

(a) Operation of Existing Investment

The objective is to devise a reporting system which will enable management to focus its experience and judgment on company trends preferably before they become problems and at least before they become debacles.

i. Groupings:

The 28 major sales groupings are used.

ii. Charting:

A uniform set of charts will show for the company as a whole, for divisions and for product groups:

> Return on Investment, Sales, Turnover, Capacity, Gross Profit, Overheads, Cost of Goods Sold, Investment Breakdown.

Forecast will be shown for the coming 12 months.

iii. Reviewing:

Division management will review these charts monthly and the Executive Committee, quarterly.

iv. Standards:

With experience, standards, including the minimum desired return on investment before taxes, will be set from time to time for these items by the Executive Committee.

(b) Planning for Future Investment

Budgetary control planning for future investment is under study.

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D. Public Relations

The relationships of the company and its supervisory personnel with employes, with communities in which we have plants, with representatives of the press and radio, with local, county and state officials and with all citizens who are molders of public opinion are the concern of every employe. Advice and assistance in these relationships is the function of the public relations staff of the Advertising and Public Relations Department.

Press and Radio Relations

It is Monsanto's policy to be prompt, accurate and forthright, consistent with good judgment, in all dealings with the press, and to make every attempt to cooperate with newspapers, magazines, trade and business publications, radio and TV stations and other media of public communications.

(1) Information Initiated by Monsanto to the Press

The gathering or assigning, writing, clearing and distribution of all such information is the responsibility of the public relations staff, and is to be released only by this group.

(2) Queries Which Come from the Press to Monsanto

A large number of such queries automatically come to public relations in St. Louis or to that group's representatives elsewhere. Such queries are handled by public relations with the help of proper parties in Monsanto, and after obtaining necessary clearances from the division, the sales departments, patent department, Research and Engineering Division, the Law Department, the President or from the Executive Committee, when necessary.

However queries also frequently come direct to division and plant personnel. In this connection, information of a purely local nature can be given directly to the press. Such statements should be given in such a form as to guard against misinterpretation. Wherever possible, public relations should be consulted first. In all instances, public relations should be advised as soon as practicable as to the contents of the statements.

Emergency Press Coverage

The following arrangements should be in force in each operating community:

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A 24-hour protective system on information should be established by general managers for the assistance of newspaper and radio station news editors; information on Monsanto contacts, including names and telephone numbers, should be furnished to newspaper and radio men.

Arrangements should be made so that the plant manager or his designated agent will be immediately informed of any untoward incidents within a plant, or anything of unusual nature to which the attention of passersby or nearby residents will be drawn. In the event of accidents, fire or other happenings which eventually will come to the attention of outsiders or newspapers, much goodwill will be developed if the plant manager immediately informs his newspaper and radio station contacts of the occurrence and supplies them with complete information at time of contact, or if complete information is not then available, informs them he is assembling such information for them and will pass it on as soon as available. So that major events can be handled efficiently and authoritatively, each plant manager should instruct members of his management group and other supervisory personnel in advance on the technique of such coverage in event he is not available. The time element always should be remembered.

In addition to personal acquaintanceships with working press and radio men, personal contacts shall be made by plant managers with publishers, editors, editorial writers of newspapers and with managers of radio stations.

Emergency Information

In event of any serious accident, explosion, fire, labor disturbance or other happening of importance and significance, a plant manager shall immediately notify his division general manager who will call the President or any one of the following members of the Advertising and Public Relations Department irrespective of whether it is day or night, weekend or holiday, so that St. Louis will be fully informed. In the event a plant manager is unable to reach his division general manager immediately, he will call one of the following who will notify others concerned:

Charles Allen Thomas, President	WYdown 1-0482 WYdown 1-2114 (unpublished)
H. A. Marple, director of Advertising and Public Relations	WOodland 2-5031

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D. J. Forrestal Jr., manager of public relations	PArkview 7-5830
J. E. McKee, assistant manager of public relations	YOrktown 5-5668

Civic Relations

Division general managers, production managers and plant managers and their principal assistants should become acquainted with and maintain frequent contact with the men and women in their communities who may be classified as "key citizens" and "molders of public opinion" and with municipal, county and state officials and any federal officials who happen to be resident there.

E. Stockholder Relations

The Chairman of the Board, or by his delegation the President, is charged with the responsibility for relationships with stockholders and sends to stockholders shortly after the end of the first, second and third quarters, statements of the earnings and financial status of the company. Shortly after the close of each calendar year, he reports to the stockholders on the year's activities, earnings and financial status.

Correspondence from stockholders on corporate matters shall be handled by the Secretary of the company. All other correspondence from stockholders shall be referred by all divisions and staff departments to the public relations group, which will prepare answers immediately for the approval and signature of the President.

Stockholders who may visit plants or offices are to be well received and shall be accorded privileges to which they are entitled as owners of the company, provided they are not associated with competitive organizations or technically trained to an extent that classified processes and other operations should not be revealed to them.

F. Labor Relations

The company recognizes the right of its employes, under federal and state laws, to join or to refrain from joining a labor organization. In those cases where the employes freely choose to join a labor organization, the company will recognize and deal with the duly certified collective bargaining agent.

The general manager of each division is responsible for labor relations, including collective bargaining, in his division. Plant managers, under

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the direction of their division general manager, are responsible for the labor relations in their plants.

Division general managers and plant managers will administer labor relations in conformity with the company-wide policy, and the Personnel Relations Department will furnish divisions and plants with up-to-date information on policy and practices.

The Personnel Relations Department will take whatever action is necessary in a given situation to assist and advise division and plant management regarding action to be taken in contract negotiations or in specific labor problems. It will participate in the planning of contract negotiations, be represented at these negotiations, if requested by the division management or the functional Vice President - Manufacturing, and will be kept fully informed of negotiation progress.

Plant managers will likewise keep the Personnel Relations Department informed on other labor relations problems of a precedent-setting nature or of significance to Monsanto company-wide, such as organizational campaigns, strikes or impending strikes, plant-union contract proposals, contract interpretations, unusual grievances and arbitrations. N.L.R.B. and labor law matters will be referred by the plant to the Personnel Relations Department for handling.

The Personnel Relations Department will keep the Executive Offices of the President, the Executive Committee, the divisions and plants fully informed on internal labor relations matters and external labor relations developments as they affect the company, including state and national legislation, or interpretations thereof.

G. Personnel Administration

The following applies to all Monsanto personnel, whether paid directly or under a contract with a U. S. Government agency.

(1) Employment

Employment Policy

Promotion from within is a basic company policy. An effort should be made in all cases to promote qualified employes prior to filling a position by hiring.

Monsanto will be diligent in its search for prospective employes of outstanding potential. The higher the position, the more important this rule becomes.

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Employment and Hiring Procedures

It is Monsanto policy to receive an application for employment from anyone who applies and to exercise great care in treating courteously all who apply.

Employment of People on Salaried Staff of Another Company or Educational Institution

In the case of an employe of such an organization applying to Monsanto for employment, he will be interviewed and extended every courtesy given any applicant for a job. Before a firm offer of employment is made to the applicant for a job, however, the applicant's current employer will be notified of Monsanto's intention to negotiate for his services and thus provide an opportunity for the current employer to talk with the applicant if he wishes. In no case will Monsanto initiate negotiations with the employe of such an organization without notifying the employer.

Hiring of Technical and Non-technical Personnel

In all cases involving the hiring of technical or non-technical salaried personnel, final appraisal and decision to hire rests with the division general manager and staff department director or his deputy.

Interview Travel

Prospective employes who are requested by the company to report for pre-employment interviews will be reimbursed for reasonable transportation and subsistence expenses.

Outside Offers of Employment to Monsanto Technical and Non-technical Personnel

In cases where outside organizations or educational institutions express a desire to contact such an employe of Monsanto with the thought of offering employment, the employe's superior shall immediately inform him of the offer. It is desirable at this point to discuss thoroughly with the employe his future with Monsanto.

Employment of Relatives

No relative, as defined below, of any executive or certain members of the supervisory staffs, outlined below, may be hired under any

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circumstances in any capacity. Such relatives shall include spouse, blood relatives, sons-in-law, daughters-in-law, brothers-in-law, sisters-in-law, parents-in-law and adopted children.

In the laboratories this rule extends down to and includes group leaders; in the plants it extends down to and includes the more important supervisors, that is men who have several units under their control. Below such ranks, relatives may be hired if they are at no time employed in the same department as their relative.

This rule applies only to the hiring of new personnel. It does not apply if an employe becomes a relative after employment, with the following exception:

> An employe having access to confidential information shall not be hired or permitted to continue working for the company if he or she is married to or hereafter marries anyone whose business interests are in conflict with those of Monsanto.
>
> Any exception shall be made only with the consent of the Vice President - Personnel. In lieu of termination, such an employe may be transferred to a position not involving access to confidential information. It shall be the responsibility of the division general manager or the staff department director to determine whether or not an employe has access to confidential information.

An employe who marries another employe of the company may continue in employment at the discretion of the division general manager or staff department director concerned, provided that in no case shall such employes work in the same department and provided also that confidential information is not made available to unauthorized personnel by such continued employment.

Contracts with Employes Covering Confidential Matters and Inventions

Each employe who is likely to make inventions in the course of his assigned field of work or whose duties give him access to confidential information regarding research and engineering developments, manufacturing processes, sales, purchasers, and purchasers' applications of our products shall sign an employment contract with the company.

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All technical personnel, now employed or hereafter hired, shall sign the long form contract, Form No. I.N. 160.

All employes, now employed or hereafter hired, other than those signing the long form contract, who have access to confidential information of the above type, shall sign the short form contract, Form No. I.N. 161.

(2) Salaries and Salary Committee

It is the policy of Monsanto to compensate its salaried employes fairly for work performed. In determining salary ranges consideration shall be given to prevailing rates paid for similar work in the community and industry. The salary paid to any individual employee shall be based upon the employe's duties, responsibilities and skill, the quality of his performance, potential, length of service and other factors of value to the company. All salaries shall be administered in conformance with the Monsanto Salary Plan published February 5, 1951, and as revised from time to time.

The Salary Committee reviews all salaries except those of board members, other officers, general managers and department directors, to insure compliance with the Monsanto Salary Plan. It is the duty of the Salary Committee to study salary policies, improve the Salary Plan and to carry out its provisions by delegation from the President.

(3) Safety

It is the policy of the company that every employe is entitled to a safe and healthful place in which to work. To this end, every reasonable effort will be made in the interest of accident prevention, fire protection and health preservation.

The member of management in charge at each location is fully responsible for the maintenance of safe and healthful working conditions and for setting up and carrying out an effective safety program.

To encourage promotion of safety, two perpetual competitions are conducted: one in the Group I plants made up of Everett; Wm. G. Krummrich; Monsanto, Tennessee; Mound Laboratory; Newport; Nitro; John F. Queeny; Ruabon; Springfield and Texas City; the other, Group II, consisting of Anniston; Avon; Cam-

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den; Carondelet; Chemical Research; Columbus; Fulmer; Kearny; Long Beach; Monsanto, Idaho; Monsanto Mexicana; Montreal; Norfolk; Oakville; Port Plastics; Santa Clara; Seattle; Shawinigan and Vancouver.

For each group there is a "President's Trophy" and an improvement placque awarded annually. A "General Manager's Trophy" is held by the plant which has accumulated the greatest number of man-hours without a lost-time accident. Any plant which has had no accidents for a quarter may fly the "No Accident" pennant.

The procedures prescribed for accident prevention and fire protection are set forth in the Accident Prevention Manual and the Safety and Fire Standards Manual.

(4) Employe Health

Any changes in a plant's operations which might affect the health of an employe or increase the hazards of his work should be reported in writing through the plant manager to the plant physician and plant safety engineer. The plant safety engineer will in turn notify the medical and safety directors in St. Louis, sending complete information on the change. They will furnish whatever information is available on any new compound or process involved in the change.

Written notice should cover such items as full trade name and correct chemical name of both the material being substituted (or used for the first time) as well as that of the present material being used. Also, a brief statement as to the increased or decreased hazard involved should be included. A notification should also be made of any contemplated tryout of material wherein the health of employes may be involved.

In addition, the plant manager, for division engineering projects, and the director of the engineering department of the Research and Engineering Division, for general engineering projects, will provide information regarding new layouts in order that the medical and safety directors may check as to possible increased health hazards and be in a position to advise as to necessary safeguards.

It is essential that all members of the supervisory staff cooperate to the fullest extent with the medical and safety directors in or-

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der that all health and accident hazards may be kept to a minimum at all times.

(5) Medical Rules

Pre-placement Physicial Examination

Every new employe, hourly or salaried, is to have a complete physicial examination before starting employment. This examination is to include a Kahn or similar blood test, a urinalysis and a chest X-ray. When temporary employes are hired, it is not necessary to include a chest X-ray until the employe is to be transferred to the permanent payroll, unless his duties involve exposure to dust, fumes or irritants.

Physical requirements for jobs vary with the type of position. It is not feasible to set down absolute limits. The judgment as to whether an individual is qualified for a particular job rests upon the examining physician. It is the policy of the company to assist handicapped workers, especially veterans, toward economic rehabilitation by placing them in jobs commensurate with their physical abilities. In each of these cases, however, direct consultation between the examining physician, the personnel manager and the safety engineer must be carried out to insure proper placement. Specific instances might be as follows:

(a) No individual with a communicable disease is to be employed until such time as measures have been taken to render the disease incommunicable. In the case of those individuals with positive Kahn blood tests, they can be accepted for employment provided they are not in the infectious stage or can show evidence that they are under treatment either by clinic or by their own personal physician and submit a report regularly to the plant physician.

(b) The employability of individuals with arrested pulmonary tuberculosis is not contraindicated in certain selected positions, but every case must be decided individually solely by the local examining physician after consultation with the applicant's private medical agency.

(c) It is not recommended to employ an individual with vision in only one eye in manufacturing departments because the possible loss of that one eye would be disastrous for the individual.

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(d) The age limit for hiring of both men and women depends entirely upon their physicial condition; personnel hired after 55 are automatically excluded from participation in the pension fund.

Re-examinations

Every hourly and salaried employe is to have a complete physical examination, preferably yearly, but not less frequently than once every two years. Records shall be maintained in order to insure such examinations are regularly performed. The extent of the examination will be determined by the company medical director after consultation with the local examining physician.

Employes, hourly or salaried, may be ordered up for physical examination at any time by plant managers, division general managers, staff department directors, if, in their opinion, examinations are necessary. In the case of division general managers and staff department directors themselves, the President may order such examinations.

The information obtained from physicial examinations shall be held confidential in the Medical Department.

Travel Examinations

Division general managers, staff department directors and plant managers, who have knowledge that members of their organization will be engaging in foreign travel, should have these employes sent to either the plant physician or, in the St. Louis area, to the medical director. This is necessary to insure that the various health requirements of foreign countries (vaccinations, inoculations, health certificates) can be obtained.

In addition, any employe who has suffered any disability that might make air travel inadvisable, should be sent either to the plant physician or the medical director for consultation before engaging on any trip where travel by air is required.

Medical Records

Accurate medical records shall be kept on each employe by the plant medical director starting with the first pre-placement physical examination. Subsequent visits to the dispensary shall be re-

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corded and kept in an approved manner. These records are to be kept confidential in the Medical Department and, if the employe is transferred to another unit of the company, they should be forwarded to the Medical Department for that plant.

Medical Treatment of Occupational Conditions

Unless state laws specify otherwise, the local plant physician (company doctor or outside engaged physician) is responsible for the treatment of all occupational disabilities. According to his judgment he may refer cases to appropriate specialists or may delegate treatment to a nurse or qualified first aid attendant. In all cases strict compliance with the state laws governing the treatment of occupational illnesses and accidents will be observed.

Medical Treatmet of Non-occupational Conditions

In some of the installations of the company, because of local conditions, it has been the practice to have the plant medical department treat all medical conditions whether occupational or not. This practice will continue and will be changed only by the ruling of the general manager of the division involved.

Otherwise, the treatment of non-occupational conditions is limited to emergency medical care or treatment of minor medical conditions to prevent loss of productive time. The amount of treatment must be governed by local conditions as well as the amount of available time at the doctor's disposal.

The plant physician will consult with any employe who seeks medical advice, but is not to offer treatment for relief of conditions that are of non-occupational origin unless temporary treatment to relieve emergency conditions, as outlined above, can be given. With these exceptions, employes seeking advice on non-occupational conditions should be referred to their own physician for treatment. In the event that an employe wishes to retain the services of a company physician as a private patient, the physician is at liberty to accept him provided established medical ethics are adhered to and there is no interference with the physician's plant duties.

The practice of preventive medicine is an extremely important part of the local medical departments. It is accomplished on an individual basis by immunization and advice at the time of re-

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examination or on a plant or department basis. The central Medical Department will cooperate on this latter aspect.

(6) Group Insurance

Group insurance coverage is provided for employes. The details of such insurance are set forth in the group insurance booklet which describes the insurance effective March 1, 1951.

(7) Sickness and Disability

Salaried employes are paid full compensation with approval of division general managers or staff department directors for absences resulting from non-occupational sickness or disability for any period up to six months. Absences with pay due to such sickness or disability in excess of six months require approval of the Retirement Plan Committee.

In the case of occupational sickness or disability where the employe receives payment under the Workmen's Compensation Law for time lost from work, the company will pay only the difference between his salary and such amount.

Hourly rated employes receive, as a result of job-incurred disability, compensation provided for by the controlling Workmen's Compensation Law plus a contribution by the company which makes the compensation plus the company's contribution equal to two-thirds of the employe's wages based on a 40-hour week. A waiting period of three days before beginning payment of such contribution shall apply and the disability benefits shall be extended to cover these three days of waiting period in all cases where absence continues for more than two weeks (14 consecutive days). The company's contribution is paid during the first year of such absence but it may continue at the request of a division general manager or staff department director and on approval of the Retirement Plan Committee. In case of absence due to occupational disability caused by an accident resulting primarily from inherent hazards of chemical and plastics manufacture and which results from causes beyond the control of the disabled employe, the employe will receive, upon approval of the division general manager or staff department director concerned, in addition to Workmen's Compensation, a contribution from the company in an amount which, plus the Workmen's Compensation,

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will equal the employe's wages based on a regular 40-hour work week. This company contribution shall continue during the first six months of such disability, but may continue over a longer period of time if requested by the division general manager or staff department director and approved by the Retirement Plan Committee. Requests for extensions must be made before the expiration of each extended six month period.

(8) Vacations

Vacations for Salaried Employes

Vacations with pay will be granted to permanent, full-time salaried employes. This also includes those permanent employes who work on a regular schedule each workweek but for a shorter period each day than the normal, as follows:

It is understood that pay for each week of vacation will be the pay received by the employe for a normal workweek of five days, or, if he is working on a regularly scheduled extended workweek, normal pay for the first five days and straight time pay for the additional time customarily worked in the week. (Vacations shall not accrue for temporary employes.)

The taking of vacations each year during the period April 1 through August 31, is considered the most practicable, but division general managers and staff department directors may make exceptions as they see fit.

Employes normally will receive a two weeks' vacation during a calendar year. April 1 of each year is the official beginning of the vacation accrual period. In computing vacation accruals, one day's vacation will be granted for each month of continuous employment until a vacation of two weeks (ten days) is achieved. Sixteen calendar days out of any calendar month will be considered a completed month in computing accrued vacation. Employes who terminate services or whose services are terminated, regardless of reason, will be given accumulated vacation, provided they have been in the company's employ not less than three completed months.

New employes will not be given credit for any vacation accrual until the completion of their third month of employment, at which time they will be credited with three full days. New em-

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ployes, hired during the normal vacation period (April 1 through August 31) of any year will be given a full two weeks' (10 days) vacation after a year of continuous service. New employes hired between September 1 and March 31, will start accruing vacation at the completion of their third month of employment (with a credit of three days) and one day per month thereafter to the next April 1. The latter group would be limited to the number of days thus accrued.

Salaried employes, who on January 1 of any year have completed 14 years or more of continuous service with Monsanto or any company acquired by Monsanto, shall be granted one week of vacation with pay in addition to the vacation they normally receive. This extra week becomes due as of each January first. Upon retirement or termination of services, such additional week will be included in computing the pro rata vacation pay of such employes at the rate of five twelfth's day for each month of service after the last January first of service with the company. The additional one week's vacation will apply not only to those who ordinarily have a two week's vacation, but also to those achieving executive vacations as well, the schedule of which is as follows:

Position	More than one year's service
Members of the Executive Committee	1 month
Members of the Executive Offices of the President	1 month
Division general managers	1 month
Assistant division general managers	1 month
Staff department directors	1 month
Officers not included in the above	3 weeks
Directors of divisional engineering, production, research and sales departments	3 weeks
Assistant staff department directors	3 weeks
Plant managers	3 weeks

Any variation from the above required by unusual or special circumstances must be approved by the division general manager or staff department director.

In computing length of continuous service for determining eligibility for vacations, only the following time will be included:

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(a) Active service with Monsanto or a company acquired by Monsanto.

(b) Time spent in military service.

(c) The first six months of a compulsory layoff. Compulsory layoff of more than six months will not break continuity of service; however, the time in excess of six months will not be included in computing continuous service.

(d) In addition to the above, at the discretion of the division general manager or staff department director concerned, time spent during absence with or without pay except in the case of compulsory layoffs beyond six months' duration.

Note: Any special problems arising under the determination of continuous service shall be cleared through the payroll section of the Accounting Department and have the approval of the Personnel Relations Department in St. Louis.

Vacations for salaried employes may not be carried over to another year. However, on specific authority received from the division general manager or staff department director concerned, vacations may under unusual circumstances be carried over for one year.

Employes entitled to three weeks' vacation or more may elect to split their vacation with the approval of a division general manager or staff department director.

In the event a holiday observed by the company falls during an employe's vacation period, one extra day will be granted. However, to avoid any inconvenience this might cause, it will be discretionary with the company as to whether the actual day is granted, or one day's pay.

Compensation in lieu of vacations may be paid only if vacation is waived at the specific request of a division general manager or staff department director.

Vacation Policy for Key Personnel on Protracted Foreign Duty

Key United States personnel on protracted foreign duty, and their families, will be entitled to certain vacation privileges which are described in detail in statement of Foreign Personnel Policy

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dated November 25, 1953, as it may be amended from time to time.

Vacations for Personnel Who Enter Military Service

If an employe is eligible for a vacation at time of leaving for military service, he will receive accrued vacation pay up to that time. After return from military service, if he is re-employed before September 1, he will be eligible for one full vacation during the calendar year of re-employment. If he returns to work after September 1, he will be eligible for a full vacation during the next vacation period. In no case, however, will he be entitled to more than one full vacation in the calendar year in which he is re-employed. Also, if he has been in the service only a short time, the vacation received on return will be less the accrued vacation paid before entering military service.

(9) Holidays, Salaried Personnel

The holidays to be observed at each location of the company will be at the discretion of the general manager of the division, taking into account local conditions. Holidays for the general offices will be designated by the Vice President - Personnel.

(10) Travel

Official Travel

Employes requested to travel on company business will be reimbursed for all transportation and subsistence expenses incurred.

The following are considered as transportation expense items: first class railroad and pullman fare or plane fare on regularly scheduled airlines, taxis, rental automobile, toll and parking fees, streetcar, bus fares and tips. If travel is by private automobile, in addition to toll and parking fees, seven cents per mile will be paid.

Subsistence expenses include the following items: lodging, meals, valet service, laundry, postage, telephone calls, telegrams and tips.

Airplane Travel

No more than a total of three Vice Presidents of the company, of which no more than two may be members of the Executive Committee, may travel in the same airplane. This includes scheduled

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flights of commercial airlines as well as company planes. The use of airplanes for trans-oceanic travel is favored.

When company planes are used, the pilots will have absolute authority as to whether flying conditions permit safe travel. Company pilots will be responsible for carrying out regulations pertaining to the periodic grounding of the planes for maintenance work.

The following time limitations are established for the company pilots:

On-duty time — 12 hours in any 24 hour period

Flying time — 8 hours in any 24 hour period

Aircraft Accident Insurance

Monsanto carries insurance policies providing for $75,000 death benefits in the case of Monsanto employes, except pilots and co-pilots, while traveling in Monsanto's own planes between territories belonging to the U.S.A. or to Canada or Mexico, and $25,000 death benefits in the case of Monsanto employes while traveling on company business in commercial or other airliners on approved flights. In the case of Monsanto pilots and co-pilots, the benefits are limited to $25,000.

Automobile Usage

Whenever possible, company-owned automobiles will be used on regular company business.

When employes are driving company-owned automobiles on company business, the company and such employes are protected by the company's insurance against damage claims for injury or damage to the person and property of third parties.

Driving back and forth to the office is in no case considered company business.

When employe-owned cars must be used, an allowance of seven cents a mile will be paid. This mileage fee covers not only operating costs, but also all other costs including all types of insurance to protect the individual and his automobile. By payment of this fee, the company discharges all of its obligations to the employe for its use of his automobile.

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When an employe uses his own automobile on company business, the company is protected by its insurance against damage claims for injury or damage to the person and property of third parties, but in such cases the employe is not protected by the company's insurance.

The employe should procure insurance if he wishes to be protected against claim for injury to the person or property of third parties or for damage to his own automobile. Such insurance policy should describe and include the business or commercial use made of such automobile.

Certain employes are also allowed to use company automobiles on extended personal trips, provided permission for such use is previously obtained from the general sales manager, branch manager, division general manager or staff department director, or those to whom they may delegate such authority. Under these circumstances the individual will be charged seven cents a mile, and the company will pay all costs of operating and maintaining the car.

When employes or members of employes' families drive a company-owned automobile on personal business, the company and the driver are all protected by the company's insurance against damage claims for injury or damage to the person and property of third parties, *provided* that such use of the automobile is with the company's permission.

The company does not carry collision insurance. Consequently, the company will be responsible for damage to a company-owned automobile when the car is being driven on company or personal business, as outlined above.

Travel and Moving Expense - New Personnel

The travel and moving expense of new personnel to the location of their work may be paid at the discretion of the division general manager or staff department director concerned. The expense will be chargeable to the receiving department or division.

(11) Transfers, Moving Expenses, Real Estate Policy

Transfers - Travel and Subsistence Expense

When an employe is assigned to a new location he will be reimbursed for travel and subsistence expenses incurred for himself and for his immediate family for a period not to exceed two weeks. In cases of personal hardship, expenses may be paid for an ad-

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ditional period as approved by his division general manager or staff department director. Travel and subsistence expenses are defined under "Official Travel" above.

Employes are permitted to return to their transfer point at company expense to assist their families in moving household effects and to take care of other related matters.

Employes who are (1) either temporarily assigned to a new location under conditions that make it inadvisable to move their families and effects, or (2) assigned to a new location on a permanent basis and who find it inconvenient to move their families immediately, will be paid their individual subsistence expenses at the discretion of the division general manager or staff department director. Such employes are expected to arrange for adequate living conditions less expensive than would be obtained as a transient in a hotel. Occasional trips home at the expense of the company may be allowed on approval of the division general manager or staff department director.

Transfers - Moving Expenses

The company will pay the cost of moving the employes' household goods and personal effects to the newly assigned location, including storage charges if required. (Details set forth in Monsanto Housing Policy, dated February, 1954, as it may be amended from time to time.)

Real Estate Policy - Transfer of Employes

When an employe is transferred at company request from one location to another, it is Monsanto's policy that the individual shall not suffer capital loss by the move. The detailed provisions of this policy are set forth in the Monsanto Housing Policy, dated February, 1954, as it may be amended from time to time.

(12) Dismissal Pay

Dismissal pay policy was established to assist financially an employe dismissed through no fault of his own. Payment of dismissal compensation is discretionary with division general managers and staff department directors. If paid, it shall be in accordance with the Dismissal Pay Plan, as follows:

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Employes are divided into three groups for purposes of administering the Dismissal Pay Plan:

Salaried employes (not under contract)
Salaried employes (under contract)
Hourly-rated employes

For purposes of the Dismissal Pay Plan, employes are hired on probation as follows:

One month for salaried employes
Four months for hourly-rated employes

An employe dismissed before or at the end of this probationary period will not be given dismissal pay.

An employe hired on a temporary assignment shall be so informed at time of employment and is not entitled to dismissal pay.

No dismissal pay shall be granted if dismissal is for cause such as dishonesty, disloyalty or insubordination, or if an employe voluntarily resigns.

For those permanently employed, dismissal pay, if granted, is on the following basis:

Salaried Employes (not under contract)

If employe has worked:

More than one month and less than 12 months, two weeks' pay.
One year but less than five years, one months' pay.
Five years but less than 10 years, two months' pay.
Ten years or more, three months' pay.

Employes who have reached their normal retirement age and who are not eligible to receive a pension, are eligible to receive dismissal pay based on length of service outlined above.

Salaried Employes (under contract)

Terms of contract provisions apply in lieu of the schedule above.

Hourly-Rated Employes

For employes with dependents with service of more than one month on a permanent assignment, the following schedule applies:

4 to 5 months	2 days
5 to 8 months	3 days

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8 to 10 months	4 days
10 to 12 months	1 week
1 to 2 years	2 weeks
2 to 3 years	3 weeks
3 to 5 years	4 weeks
5 to 7 years	5 weeks
7 to 10 years	6 weeks
Over 10 years	8 weeks

For employes without dependents, two-thirds of the above rates apply.

Salaried Employes - Hourly-Rated Employes

Division general managers and staff department directors may refer special cases to the Retirement Plan Committee which may authorize dismissal pay up to six months provided the employe has been with the company for 10 years or longer.

(13) Pension Plans

The company provides two pension plans, one for salaried and one for hourly-paid employes, details of which are set forth in two booklets described respectively as the Retirement Plan for Salaried Employes and the Retirement Plan for Hourly Employes.

The Monsanto pension plans are administered by the Retirement Plan Committee, of which the Vice President - Personnel acts as Chairman.

This committee is responsible to and operates under the authority of the Board of Directors. Its rules and regulations are largely the various provisions of the pension plans which are set forth in the above-mentioned booklets. Additional rules and interpretation of those stated in the plans will be adopted as found necessary. It is the primary duty of this committee to handle all administrative problems of the pension plans and review the action taken by the pension boards established by the terms of the collective bargaining agreements entered into with the representatives of the hourly employes.

(14) Death in Line of Duty

In the event of the death of an employe arising out of and in the course of his employment, the company will seek to prevent undue financial hardship by the employe's family or dependents. The administration of this policy shall be discretionary with full re-

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sponsibility being vested in the directors of the Treasury and Personnel Relations Departments jointly.

(15) Military Service

The company has adopted a policy governing its relationship with employes affected by military service. The details of that policy are set forth in a booklet entitled "As You Enter the Armed Forces," revised January, 1953.

(16) Jury Service

The company encourages employes to perform jury service and it is hoped that each employe will respond to this civic obligation when summoned. If special reasons make a postponement of service preferable, arrangements may sometimes be made for service at a later date. However, the company will in no event lend aid toward getting summons cancelled.

Hourly Employes

To avoid financial hardship while on jury duty, the company will pay the difference between jury fees and an employe's regular rate of earnings. The days or hours absent should not be considered in computing overtime.

Salaried Employes

Full wages are paid while on jury duty and it is considered an approved absence for purposes of computing overtime for non-exempt employes.

(17) Leaves of Absence

Salaried Employes

For Army, Naval and National Guard Reserves:

Employes who are members of the Army or Naval Reserves or National Guard may be given leaves of absence without pay for annual maneuvers or encampment. They are at liberty to schedule their vacation period concurrently with such leave of absence, if they so desire.

For urgent personal business:

Leave of absence with pay for urgent personal business (such as illness in immediate family) may be granted salaried personnel on

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approval of division general managers or staff department directors for short periods of time only where circumstances warrant. Such absences are not considered as time worked for purposes of computing overtime.

Leaves of absence with pay also are granted for the following reasons:

1. Illness. (See section on sickness and disability payments.)
2. Death in family.
3. Jury duty. (See section on jury service.)

(The above are "approved" absences included in determining overtime payments.)

Attendance at technical meetings:

Selected scientific and technical employes who attend technical conferences are paid their salaries and reimbursed for travel expenses. Travel expense is on the same basis as defined under "Travel" above. Technical employes who are not selected but who desire to attend technical conferences will be paid their salaries only, upon approval of their attendance by their division general manager or staff department director.

Leaves of absence without pay are permitted with the approval of division general managers or staff department directors to meet certain personal situations and emergencies.

Hourly Employes

For Army, Naval and National Guard Reserves:

Employes who are members of the Army or Naval Reserves or National Guard may be given leaves of absence without pay for annual maneuvers or encampment. They are at liberty to schedule their vacation period concurrently with such leave of absence, if they so desire.

If it does not interfere with operations, or with our relations with a union, the plant manager may, at his discretion, arrange shift changes for personnel, if they so request, in order to permit them

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to participate in any established night drill practice as is carried on by the National Guard.

In the event of death in the family:

Full wages will be paid during absence from duty of hourly-rated employes when such absence is caused by the death and attendance at funeral of a wife, husband, child, parent, brother, sister, parent-in-law, brother-in-law or sister-in-law. The number of days will be left to the discretion of the plant manager or staff department director. These days or hours voluntarily granted by the company will not be considered as days worked in computing overtime.

Leaves of absence without pay are permitted with the approval of division general managers or staff department directors to meet certain personal situations and emergencies.

(18) Outside Work by Employes on Own Time

The engaging of company personnel in outside jobs on their own time is not looked upon with favor, since full time employes are expected to give all their best efforts to the company and usually additional hours worked reduce their efficiency. However, such activity is not expressly forbidden. In the case of men of specialized knowledge, occasional work of limited duration is not objectionable.

(19) Solicitation of Employes

For contributions:*

Employes are not to be solicited or solicit on company time or on company premises for contributions to any organization or fund, with the sole exceptions of local Community Chest Funds or War Bond Drives and Red Cross annual roll calls or specific relief funds in time of major disasters.

Such solicitations will be permitted only if they can be conducted without undue interference with normal plant or office operations.

For memberships:*

Employes are not to be solicited or solicit on company time or on

*These provisions do not apply to solicitation for union membership or union dues during non-working hours.

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company premises, parking lots included, to join any organization, whether social, fraternal, business or trade.

For purchases:

Employes are not to be solicited by salesmen on company premises or during working hours. Lists of employes will not be given to anyone outside the company and will not be released to members of the company without approval by a division general manager or staff department director.

(20) Stock Purchase Plan

The decision to purchase Monsanto stock is one which each employe must make for himself. Realizing the desire of some employes to have a part in the ownership of the company, provision has been made for the purchase of stock in accordance with a stock purchase plan. Details are set forth in a booklet entitled "Monsanto Employes' Stock Purchase Plan."

(21) Bonus Plan

Under the Bonus Plan, bonuses of common stock of the company and/or cash may be granted to those employes who contribute most to the company's success, including those who have proven themselves qualified to occupy important managerial posts and to succeed to higher positions. It is hoped thus to compensate not only for services rendered but also to encourage further efforts by making employes participants in the company's prosperity.

Officers and employes who receive a salary at or above such monthly rate as the Bonus Committee (composed of the Chairman of the Board and two non-officer board members) from year to year fixes, shall be eligible for consideration for a bonus award. Employes receiving monthly salaries of less than such amount may, in the discretion of the committee, be given special awards. The committee considers award recommendations for all employes and officers, who are not board members, as made by the President after he has reviewed with division general managers and staff department directors their recommendations for bonuses to members of their organizations. The Bonus Committee alone deals with awards for eligible members of the board and the Executive and Finance Committees. It has sole discretion to determine all

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bonus awards and which persons shall participate in any year's awards. There is no fixed relationship between an individual's salary and his bonus. Recipients are paid bonus awards in four annual installments. A recipient who leaves the company's service shall under certain conditions lose any right to the unpaid balance of his award.

An officer or employe who is granted a stock option under the company's Stock Option Plan is not eligible for a bonus award based on the company's operations for the calendar year during which the stock option was granted.

Members of the Bonus Committee are not eligible to receive bonus awards.

(22) Stock Option Plan

Under the Stock Option Plan, the Board of Directors may authorize the grant of options to purchase unissued or reacquired common stock of the company to officers and other employes of the company and its subsidiary companies, including members of the Board of Directors of the company who are also salaried officers.

The options are granted to such persons and in such amounts as the Stock Option Committee (composed of the Chairman of the Board and two non-officer board members) shall determine. Under the terms of the plan, members of the committee are ineligible to receive stock options.

(23) Foreign Personnel Policy

Realizing that certain problems and conditions arise which are peculiar to company personnel assigned to foreign duty, provision has been made therefor in a statement entitled "Foreign Personnel Policy" originally issued November 25, 1953, and as it may be amended from time to time.

(24) John and Olga Queeny Educational Foundation

To help employes continue their education or that of their children, the John and Olga Queeny Educational Foundation was established by Edgar M. Queeny, Chairman of the Board, and his sister, Mrs. Thomas P. Berington, as a memorial to their father, John F. Queeny, and their mother, whose maiden name the company bears.

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While this is not a company project, loans from this fund are available only to Monsanto employes and their children.

Details concerning this foundation will be found in the booklet entitled "John and Olga Queeny Educational Foundation."

(25) Employe Cafeterias

At numerous plants, cafeterias for employes are provided by the company. Food and service are provided at the lowest possible cost. These cafeterias are expected to operate so that they neither lose money nor show a profit. Overhead charges, rent of quarters and facilities must not be included in the costs.

(26) Credit Unions

The credit unions which have been organized at most plants offer advantages employes cannot obtain from finance companies. Strictly cooperative organizations, they are operated entirely by employes, although the company has encouraged the formation of these organizations.

Employes may borrow money from a credit union at a reasonable rate of interest or may deposit their savings with it. The interest received on savings accounts is determined by the credit union's earnings.

(27) Fellowships

The company maintains and finances a number of fellowships at well known universities. The institution is entirely free to choose the recipient as well as the course of study. Information regarding these fellowships may be obtained from the development department of the Research and Engineering Division, in St. Louis, or the universities concerned.

(28) New Personnel Policies or Procedures

No new personnel policy shall be instituted or any existing one modified by any unit of the company without prior approval of the Vice President - Personnel.

H. Miscellaneous

(1) Directorships in Other Corporations

No officer shall serve as a director of another industrial corpora-

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tion unless it is pursuant to an exception made by the Board of Directors in a particular case.

(2) Unsolicited Suggestions from Outsiders

The company receives from time to time letters disclosing or asking permission to disclose inventions, advertising themes, slogans and the like which the writer hopes may be of value to the company in its business.

There is danger in accepting or discussing such suggestions from outsiders inasmuch as similar ideas or suggestions may already be under development in the laboratories, plants or the Advertising and Public Relations Department and, when adopted later, may give rise to the belief of the outsider that such development was based on his suggestion.

To avoid such controversies, letters pertaining to new products or processes should be referred immediately to the research director of the division involved, or if not obviously a divisional matter, to the general development department director of the Research and Engineering Division in St. Louis, where miscellaneous developmental matters are evaluated, who will reply after consulting with the resident patent attorney.

Letters pertaining to advertising themes, slogans, trade marks and the like should be referred immediately to the director of the Advertising and Public Relations Department.

(3) Contributions

A trust fund has been established for the purpose of covering company contributions for charity, welfare and education. A percentage of net sales or net profits as set by the Board of Directors from time to time is appropriated for this trust.

The Charitable Trust Fund is managed by a Board of Control appointed by the Board of Directors and consisting of the President, the Executive Vice President and the Vice President - Personnel.

Local Community Chest and Red Cross chapters should be given principal consideration in making contributions from any plant or office location. Small contributions are made to the Red Cross with the understanding that should a disaster occur the Red Cross

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contributions will be increased at the expense of the Community Chest.

A complete budget, listing specifically all contributions for charity, welfare and education for all locations, is submitted to the Board of Control by the coordinator of contributions, the director of the Personnal Relations Department, for its approval, with the provision that all plants and branch offices will be allowed a nominal sum for miscellaneous contributions that cannot be anticipated.

Checks to be drawn on this trust fund can only originate in St. Louis, and will be sent to the general manager, plant manager or branch office manager for presentation. Checks or credit cannot be issued by the trust to reimburse for a contribution already made. All checks issued by the trust must be made payable to the specific charity, welfare or educational organization.

Contributions cannot be made to any political or labor organization. Contributions should not be made to any organization receiving aid from the Community Chest, without approval of the trustees. Contributions should not be made to any church organization except those located in the immediate vicinity of the plant location (not including branch offices), and should be limited to a maximum of $50 per year.

Contributions for the purchase of advertising in programs or publications will not be considered by this trust. This fund is not intended to cover any memberships, subscriptions, direct advertising or contributions made as a business expense.

(4) Plant Inspection

To encourage adherence to the company's policy that all operations shall be well maintained and service facilities for employes shall be on a high plane, all domestic operations shall be inspected every 18 months at time designated by the President, who shall appoint an Inspection Committee to tour the plants, except those plants Government-owned, and submit to the Executive Offices of the President immediately the findings as a group and as individuals.

The Inspection Committee is a temporary one, appointed for the duration of the tour only. Administration of the inspection program is by the Personnel Relations Department.

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The plants are divided into three groups, depending on size, and a pennant is awarded to the best in each group.

(5) Insurance

Property insurance functions are under the joint control of the Treasury Department and the engineering department of the Research and Engineering Division.

The engineering department of the Research and Engineering Division handles the technical and physical phases of insurance relating to boiler and machinery, and fire, tornado and kindred risks, and shall consult freely with division general managers and plant managers regarding such insurance. The Treasury Department and the engineering department of the Research and Engineering Division will cooperate in the settling of claims for losses and in the determination of insurance values, coverage, terms and conditions of policies, etc. Financial, statistical and administration functions are handled in the Treasury Department.

In the event of fire, explosion, windstorm, etc., causing property damage or loss of use and occupancy, the plant manager involved must promptly notify the insurance company carrying the risk, and at the same time notify the insurance engineer in the engineering department of the Research and Engineering Division and the Treasury Department in St. Louis. General description of damage and the extent thereof by telegram will suffice for this first notice, followed by a letter to the Treasury Department, with a copy to the insurance engineer in the engineering department of the Research and Engineering Division, giving full details and a preliminary estimate of loss. The Treasury Department will then formally confirm the telegraphic notification to the carrier by registered mail.

All computations and proofs of loss for submission to insurance companies as a basis of settlement must be submitted to the insurance section of the Treasury Department at St. Louis for approval, recheck and negotiations with claim adjusters.

Negotiations of loss settlements will be conducted by members of the insurance section of the Treasury Department and the engineering department of the Research and Engineering Division, in St. Louis, except that a delegation of authority to settle losses

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may be made by the Treasury Department in writing, stating the limitations of such authority. Where claims are handled under such delegation of authority, a complete report of the final settlement must be made to the insurance section of the Treasury Department and to the insurance engineer in the engineering department of the Research and Engineering Division, who shall maintain a complete statistical record.

The Treasury Department shall handle all casualty and indemnity insurance matters, such as public liability and property damage, products liability, automobile insurance, fidelity bond and crime insurance.

The Treasury Department shall handle marine insurance in cooperation with the Overseas Division, use and occupancy insurance in cooperation with the Accounting Department and purchase of Workmen's Compensation insurance.

Designs for new plants or departments and designs covering alterations of existing plants or departments must be submitted by operating divisions and staff departments to the insurance engineer in the engineering department of the Research and Engineering Division, who, in turn, will submit them to the insurance carrier for clearance.

Projects which are estimated to cost less than $15,000 and which do not change the insured hazards of the operation are considered exempt under this procedure. All other projects shall not be commenced until clearance from the insurance carrier has been obtained. In cases of emergency, the division general managers' approval to proceed with work under the designs will be sufficient prior to the receipt of approval from the insurance carriers; but in such cases it is required that the insurance carriers (and those in the company organization who ordinarily would be notified) shall be notified that the work is proceeding and be requested to expedite their approval.

Recommendations contained in inspection reports submitted by our insurance carriers must always be commented upon by the divisions or staff departments, such comments being sent promptly to the insurance engineer in the engineering department of the Research and Engineering Division, who will promptly take up the matter with the insurance carrier involved. In the event of

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disagreement as to compliance with any insurance inspector's recommendation between any such division or staff department and the engineering department of the Research and Engineering Division, the dispute will be referred to the director of the engineering department, Research and Engineering Division, and the director of the Treasury Department. If the directors of these two departments cannot agree with the division or staff department, they will take up the matter with the division general manager or staff department director involved, and if agreement cannot be reached after such discussion, the matter shall be taken to the Vice President - Manufacturing for settlement.

(6) Research Contracts Between Divisions

To avoid confusion when one division makes a contract with another division to carry out research, the former division shall appoint a coordinator from its staff through whom will flow all the contracts with the research department of the latter division.

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BYLAWS

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MONSANTO CHEMICAL COMPANY

BY-LAWS

OFFICES

1. The principal office shall be in the City of Wilmington, County of New Castle, State of Delaware, and the name of the resident agent in charge thereof is The Corporation Trust Company.

2. The corporation may also have an office in the City of St. Louis, State of Missouri, and also offices at such other places as the board of directors may from time to time appoint or the business of the corporation may require.

SEAL

3. The corporate seal shall have inscribed thereon the name of the corporation and the words "Seal, Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

STOCKHOLDERS' MEETINGS

4. All meetings of the stockholders for the election of directors shall be held at the office of the corporation in the City of St. Louis, State of Missouri. Special meetings of stockholders for any other purpose shall also be held at the office of the corporation in the City of St. Louis.

5. An annual meeting of stockholders shall be held on the second Thursday of April in each year if not a legal holiday, and if a legal holiday, then on the next secular day following, at 10 o'clock A.M., when they shall elect by a plurality vote, by ballot, a board of directors, and transact such other business as may properly be brought before the meeting.

6. The holders of a majority of the stock issued and outstanding, and entitled to vote thereat, present in person, or represented by proxy, shall be requisite and shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by law, by the certificate of incorporation or by these by-laws. If, however, such a majority shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person, or by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until the requisite amount of voting stock shall be present. At such adjourned meeting at which the requisite amount of voting stock shall be represented any business may be transacted which might have been transacted at the meeting as originally notified.

7. At any meeting of the stockholders every stockholder having the right to vote shall be entitled to vote in person, or by proxy appointed by an instrument in writing subscribed by such stockholder or his duly authorized agent and bearing a date not more than three years prior to said meeting, unless said instrument provides for a longer period. Each stockholder shall have one vote for each share of stock having voting power, registered in his name on the books of the corporation, and except where the transfer books of the corporation shall have been closed or a date shall have been fixed as a record date for the determination of its stockholders entitled to vote, no share of stock shall be voted on at any election for directors which shall have been transferred on the books of the corporation within twenty days next preceding such election of directors. Prior to a meeting of the stockholders, the president shall appoint two inspectors, who shall receive and canvass the votes cast at such meeting and

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certify the results to the president or chairman of the meeting. Such inspectors need not be stockholders. Before entering upon the performance of their duties the inspectors shall make oath that they will faithfully, honestly and impartially perform their duties as such inspectors.

The written proxies shall be filed with the inspectors who shall pass upon the sufficiency thereof before permitting any attorney or agent to vote thereon. Prior to any stockholders' meeting the board may recommend to stockholders (if they do not intend to attend the meeting in person) that they send in their proxies to the secretary, running to such representative or representatives as the board may designate.

8. Written notice of the annual meeting shall be mailed to each stockholder entitled to vote thereat at such address as appears on the stock ledger of the corporation, at least ten days prior to the meeting.

9. A complete list of the stockholders entitled to vote at the ensuing election, arranged in alphabetical order, with the residence of each, and the number of voting shares held by each, shall be prepared by the secretary and filed in the office where the election is to be held, at least ten days before every election, and shall at all times, during the usual hours for business, and during the whole time of said election, be open to the examination of any stockholder.

10. Special meetings of the stockholders, for any purpose, or purposes, unless otherwise prescribed by statute, may be called by the president, or pursuant to resolution of the board, and shall be called by the president or secretary at the request in writing of a majority of the board of directors, or at the request in writing of stockholders owning a majority in amount of the entire capital stock of the corporation issued and outstanding, and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

11. Business transacted at all special meetings shall be confined to the object stated in the call.

12. Written notice of a special meeting of stockholders, stating the time and place and object thereof, shall be mailed, postage prepaid, at least ten days before such meeting, to each stockholder entitled to vote thereat at such address as appears on the books of the corporation.

DIRECTORS

13. The property and business of this corporation shall be managed by its board of directors, nine in number. Directors need not be stockholders. They shall be elected at the annual meeting of the stockholders, and each director shall be elected to serve until his successor shall be elected and shall qualify.

14. The directors may hold their meetings and have one or more offices, and keep the books of the corporation, except the original or duplicate stock ledger, outside of Delaware in the City of St. Louis, Missouri, or at such other places as they may from time to time determine.

15. Vacancies in the office of any director or directors and newly created directorships resulting from any increase in the authorized number of directors, may be filled by a majority of the directors then in office, though less than a quorum, and the directors so chosen shall hold office until the next annual election and until a successor or successors have been duly elected, unless sooner displaced.

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16. In addition to the powers and authorities by these by-laws expressly conferred upon it, the board of directors may exercise all such powers of the corporation and do all such lawful acts and things as are not by statute or by the certificate of incorporation or by these by-laws directed or required to be exercised or done by the stockholders.

COMMITTEES OF DIRECTORS

17. The board of directors may, by resolution or resolutions passed by a majority of the whole board, designate one or more committees, each committee to consist of two or more of the directors of the corporation, which, to the extent provided in said resolution or resolutions, shall have and may exercise the powers of the board of directors in the management of the business and affairs of the corporation, and may have power to authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the board of directors.

18. The committees shall keep regular minutes of their proceedings and report the same to the board when required; but failure to keep such minutes shall not affect the validity of any acts of the committee or committees, if such acts were authorized by a majority of the members thereof.

COMPENSATION OF DIRECTORS

19. Directors, as such, shall not receive any stated salary for their services, but by resolution of the board, a fixed sum and expenses of attendance, if any, may be allowed for attendance at each regular or special meeting of the board; PROVIDED, that nothing herein contained shall be construed to preclude any director from serving the corporation in any other capaicty and receiving compensation therefor.

20. Members of special or standing committees may also be allowed compensation and expenses of attendance for attending committee meetings.

MEETINGS OF THE BOARD

21. Each newly elected board may meet at such place and time either within or without the State of Delaware as shall be fixed by the vote of the stockholders at the annual meeting, and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, PROVIDED, a majority of the whole board shall be present; or they may meet at such place and time as shall be fixed by the consent in writing of all directors.

22. Regular meetings of the board may be held without notice at such time and place either within or without the State of Delaware as shall from time to time be determined by the board.

23. Special meetings of the board may be called by the president on two days' notice to each director, either personally or by mail or by telegram; special meetings shall be called by the president or secretary in like manner and on like notice on the written request of two directors.

24. All meetings of the board, whether regular or special, shall be held at the office of the company in the City of St. Louis unless some other place is specified in the notice for such meeting.

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25. At all meetings of the board four directors shall be necessary and sufficient to constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by statute or by the certificate of incorporation or by these by-laws.

OFFICERS

26. The officers of the corporation shall be chosen by the directors and shall be a chairman of the board, president, executive vice-president, one or more vice-presidents, secretary, treasurer and comptroller. The board of directors may also appoint assistant secretaries, assistant treasurers and assistant comptrollers and such other officers as it shall deem necessary. One person may hold more than one office. The chairman of the board and the president shall be chosen from among the directors.

27. The officers shall be chosen by the board of directors at its first meeting after each annual meeting of the stockholders of the company and shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the board of directors.

28. The officers of the corporation shall hold office until their successors are chosen and qualify in their stead. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the whole board of directors. If any office becomes vacant for any reason, the vacancy shall be filled by the board of directors.

29. The salaries of all officers of the corporation shall be fixed by the board of directors. Salaries of all employes (including bonus provisions, if any) shall be fixed by the president or by persons by him authorized to do so.

30. In addition to their fixed salaries, the board may authorize the payment of additional compensation or bonus, to such officers as come within such bonus plan or plans as the board may deem wise and establish, as an incentive to greater efficiency. The fact that members of the board, who are active officers of the company, may be benefited by such bonus plan, shall not disqualify them from voting in favor of the adoption of such plan. Any bonus plan adopted by the board must, however, provide only reasonable additional compensation, based on results to be accomplished, and taking into consideration the investment of the company in property and plant account and working capital, and other matters reasonably necessary to make such plan fair and equitable to all concerned.

CHAIRMAN OF THE BOARD

31. The chairman of the board shall preside at all meetings of the board of directors and of the stockholders, except such as under the law must be presided over by the president or a specially appointed chairman. He shall be an ex-officio member of all committees. He shall act in an advisory capacity with respect to matters of policy and other matters of importance pertaining to the affairs of the company. He shall prepare, sign and send out reports and other messages which are to be sent to stockholders from time to time. He shall also perform such other duties as may be assigned to him by the board.

PRESIDENT

32. In the absence of the chairman of the board, the president shall preside at all meetings of the stockholders and of the board of directors. He shall be the chief executive officer

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of the corporation and shall have general and active management of the business of the corporation and see that all orders and resolutions of the board of directors are carried into effect. He shall also execute bonds, mortgages and other contracts under the seal of the corporation.

33. He shall be ex-officio a member of all standing committees and shall have the general powers and duties of supervision and management usually vested in the office of president of a corporation.

EXECUTIVE VICE-PRESIDENT

34. The executive vice-president shall assume and perform the duties and exercise the powers of the president as the chief executive officer of the corporation in the absence or disability of the president, and shall handle such general administrative duties as may be directed by the board of directors or by the president.

VICE-PRESIDENTS

35. The vice-presidents shall assume and perform the duties and exercise the powers of the president in the absence or disability of the president and executive vice-president, and shall perform such other duties as may be prescribed by the board of directors or by the president.

SECRETARY AND ASSISTANT SECRETARIES

36. The secretary shall attend all sessions of the board and all meetings of the stockholders and record all votes and the minutes of all proceedings in a book to be kept for that purpose; and shall perform like duties for the standing committees when required. He shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the board of directors, and shall perform such other duties as may be prescribed by the board of directors or president, under whose supervision he shall be. He shall keep in safe custody the seal of the corporation, and when authorized by the board, or proper committee or president or vice-president, affix the same to any instrument requiring it, and when so affixed, it shall be attested by his signature or by the signature of an assistant secretary.

37. The assistant secretaries, shall in the absence or disability of the secretary, perform the duties and exercise the powers of the secretary, and shall perform such other duties as the board of directors or the president or secretary shall prescribe.

TREASURER AND ASSISTANT TREASURERS

38. The treasurer shall have the custody of the funds and securities of the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the board of directors. He shall disburse the funds of the corporation when properly authorized by vouchers prepared and approved by the comptroller, and shall invest funds of the corporation when approved by the board of directors or the finance committee. He shall render to the president and board of directors whenever they may require it, an account of all his transactions as treasurer. If required by the board of directors, he shall give the corporation a bond in such sum, and with such surety or sureties as shall be satisfactory to the board, for the faithful performance of the duties of his office, and for the restoration to the corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the corporation.

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39. The assistant treasurers shall, in the absence or disability of the treasurer, perform the duties and exercise the powers of the treasurer, and shall perform such other duties as the board of directors or the president or treasurer shall prescribe.

COMPTROLLER AND ASSISTANT COMPTROLLERS

40. The comptroller shall be the principal officer in charge of the accounts of the company and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation. He shall render to the president and board of directors, whenever they may require it, an account of all of his transactions as comptroller and of the financial condition of the corporation, and shall perform such other duties as shall from time to time be assigned to him by the board of directors or the president. If required by the board he shall give the corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the board for the faithful performance of the duties of his office.

41. The assistant comptrollers shall, in the absence or disability of the comptroller, perform the duties and exercise the powers of the comptroller, and shall perform such other duties as the board of directors or the president or comptroller shall prescribe.

DUTIES OF OFFICERS MAY BE DELEGATED

42. In the case of the absence of any officer of the corporation, or for any other reason that the board may deem sufficient, the board may delegate, for the time being, the powers or duties or any of them, of such officer to any other officer, or to any employe.

43. Each director and each officer (and his heirs, executors and administrators) shall be indemnified by the corporation against any costs and expenses reasonably incurred by him in connection with any action, suit or proceeding to which he may be made a party by reason of his being or having been a director or officer of the corporation or of any other company which he serves or has served as director or officer at the request of the corporation, and against any amounts paid by him in settlement of or in satisfaction of a judgment in any such action, suit or proceeding (other than amounts paid or payable to the corporation), provided that no director or officer shall be indemnified against any costs, expenses or payments in relation to any matter as to which he shall be finally adjudged liable under the Securities Act of 1933, as amended, or derelict in the performance of his duties as such director or officer, or in relation to any matter as to which there has been no adjudication with respect to his performance of his duty unless the corporation shall receive an opinion from independent counsel that the director or officer is not liable under the Securities Act of 1933, as amended, and has not so been derelict; and provided that the foregoing right of indemnification shall not be exclusive of other rights to which he may be entitled as a matter of law.

CERTIFICATES OF STOCK

44. The certificates of stock of the corporation shall be numbered and shall be entered in the books of the corporation as they are issued. They shall exhibit the holder's name and number of shares and shall be signed by the president or a vice-president and attested by the secretary or assistant secretary and the corporate seal shall be attached, and all stock certificates shall be transferred by a transfer agent or transfer agents and registered by a registrar or registrars to be appointed by the company. Such corporate seal may be a facsimile, engraved or printed. Where any such stock certificate is signed by a transfer agent and by a registrar the signatures of any such president, vice-president, secretary or assistant secretary upon such certificates may be facsimiles, engarved or printed. In case any such officer who has signed or

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whose facsimile, engraved or printed, signature has been placed upon such certificate, shall have ceased to be such officer before such certificate is issued, such certificate may nevertheless be issued with the same effect as if such officer had not ceased to be such officer at the date of its issuance.

TRANSFERS OF STOCK

45. Transfers of stock shall be made on the books of the corporation only upon surrender of the certificate therefor endorsed by the person named in the certificate or by attorney, lawfully constituted in writing.

CLOSING OF TRANSFER BOOKS

46. The board of directors shall have power to close the stock transfer books of the corporation for a period not exceeding fifty days preceding the date of any meeting of stockholders or the date for payment of any dividend or the date for the allotment of rights or the date when any change or conversion or exchange of capital stock shall go into effect or for a period of not exceeding fifty days in connection with obtaining the consent of stockholders for any purpose; provided, however, that in lieu of closing the stock transfer books as aforesaid the board of directors may fix in advance a date, not exceeding fifty days preceding the date of any meeting of stockholders or the date for the payment of any dividend, or the date for the allotment of rights, or the date when any change or conversion or exchange of capital stock shall go into effect, or a date in connection with obtaining such consent, as a record date for the determination of the stockholders entitled to notice of, and to vote at any such meeting and any adjournment thereof, or entitled to receive payment of any such dividend, or to any such allotment of rights, or to exercise the rights in respect of any such change, conversion or exchange of capital stock, or to give such consent, and in such case such stockholders, and only such stockholders as shall be stockholders of record on the date so fixed, shall be entitled to such notice of, and to vote at such meeting and any adjournment thereof, or to receive payment of such dividend, or to receive such allotment of rights, or to exercise such rights or to give such consent, as the case may be, notwithstanding any transfer of any stock on the books of the corporation after any such record date fixed as aforesaid.

REGISTERED STOCKHOLDERS

47. The corporation shall be entitled to treat the holder of record of any share or shares of stock as the holder in fact thereof, and, accordingly, shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person, whether or not it shall have express or other notice thereof, save as expressly provided by the laws of Delaware.

LOST CERTIFICATE

48. Any person claiming a certificate of stock to be lost or destroyed shall make an affidavit or affirmation of that fact and avertise the same in such manner as the board of directors may require, and the board of directors may, in its discretion, require the owner of the lost or destroyed certificate, or his legal representative, to give the corporation a bond, sufficient to indemnify the corporation against any claim that may be made against it on account of the alleged loss of any such certificate or the issuance of a new certificate in lieu thereof, and payment of dividends to the holder of such new certificate. A new certificate of the same tenor and for the same number of shares as the one alleged to be lost or destroyed may be issued without requiring any bond when, in the judgement of the directors, it is proper so to do.

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CHECKS, NOTES, ETC.

49. Checks against funds in bank shall be signed by such officer or employe as the board may direct. The board may also require countersignatures to checks. The board shall also designate the officer or officers to be authorized to sign notes, drafts, acceptances, etc., in behalf of the company and to pledge securities of the company for the payment of the same. The board shall also designate the officers or employes who shall be authorized to endorse notes, drafts, acceptances, etc., for the company. The board shall also designate the proper officers to sign other documents in behalf of the company.

FISCAL YEAR

50. The fiscal year shall begin the first day of January in each year.

AUDITORS

51. The books of the company shall be audited annually or oftener by certified public accountants, to be selected by the board.

VOTING STOCK OF OTHER CORPORATIONS

52. Unless otherwise ordered by the board of directors the president shall have full power and authority in behalf of the company to attend and to act and to vote at any meeting of stockholders of any corporation in which this company may hold stock and at any such meeting shall possess and may exercise any and all of the rights and powers incident to the ownership of such stock. The board of directors by resolution from time to time may confer like powers upon any other person or persons. If the board has failed to authorize the execution of a proxy for such purpose, then the president, notwithstanding such failure, may, in the name of the corporation, execute such proxy in favor of such person or persons as he may select to represent this company at such meeting or meetings.

DIVIDENDS

53. Dividends upon the capital stock of the corporation, subject to the provisions of the certificate of incorporation, if any, may be declared by the board of directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock.

54. Before payment of any dividend there may be set aside out of any funds of the corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve fund to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the directors shall think conducive to the interest of the corporation, and the directors may abolish any such reserve in the manner in which it was created.

DIRECTORS' ANNUAL STATEMENT

55. The board of directors, through the president, shall present at each annual meeting, and when called for by vote of the stockholders at any special meeting of the stockholders, a full and clear statement of the business and condition of the corporation.

NOTICES

56. Whenever under the provisions of these by-laws notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice

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may be given in writing, by mail, by depositing the same in the post office or letter box, in a post-paid sealed wrapper addressed to such stockholder or director at such address as appears on the books of the corporation, or, in default of other address, to such director or stockholder at the General Post Office in the City of Wilmington, Delaware, and such notice shall be deemed to be given at the time when the same shall be thus mailed.

57. Any stockholder or director may waive any notice required to be given under these by-laws; and meetings of the stockholders or of the board of directors may be held pursuant to waivers.

AMENDMENTS

58. These by-laws may be altered or amended or repealed by the affirmative vote of a majority of the stock issued and outstanding and entitled to vote thereat, at any regular meeting of the stockholders or at any special meeting of the stockholders if notice of the proposed alteration or amendment or repeal be contained in the notice of such special meeting, or by the affirmative vote of a majority of the board of directors at any regular meeting of the board or at any special meeting of the board if notice of the proposed alteration, amendment or repeal be contained in the notice of such special meeting; provided, however, that no change of the time or place for the election of directors shall be made within sixty days next before the day on which such election is to be held, and that in case of any change of such time or place, notice thereof shall be given to each stockholder in person or by letter mailed to his last known post office address at least twenty days before the election is held.

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CHARTS AND ADDENDUM

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ADDENDUM #1.

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Comments on Appropriation Requests Form

The figures given under "Estimate of Capital Requirements" should represent installed costs, including design and construction overheads. Items should be shown for land, preparation of site, and returnable shipping containers whenever such costs are incurred.

"Total Fixed Capital" is the proportionate share of the capital value of all new and existing manufacturing and non-manufacturing facilities used to produce (a) the products under consideration and (b) any intermediate products or services which are used and charged at cost in the production chain ending in those products. The value of facilities used to make an intermediate product in another division should not be included, if the intermediate product is transferred at its sales price in the calculations of new earnings. The word "facilities" includes buildings as well as machinery and equipment.

The proportionate value of manufacturing facilities of the intermediate product used to produce the end product is calculated on the basis of the quantity of intermediate product required for and the end product, compared with the rated output of the facilities for the production of the intermediate product.

In arriving at the estimate, the proportionate investment in non manufacturing facilities may be approximated as follows:

(a) Steam generation and distribution at $ (A) per pound of steam used by the proposed project per average operating hour.

(b) Electric power generation and distribution at $ (B) per kilowatt-hour used per average operating hours.

(c) Other non-manufacturing facilities, at $ (C) per $100 invested in manufacturing facilities. This figure is exclusive of steam and power generation and distribution, research, idle equipment and land.

Present values (September, 1954) of (A), (B) and (C) for representative plants are given in the following table. Figures marked (d) are for distribution systems only.

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Plant	(A) Steam	(B) Electric	(C) Other
John F. Queeny	$11.00	$86.00	$27.00
William G. Krummrich	13.00	158.00	27.00
Norfolk	4.00	32.00 (d)	34.00
Nitro	10.00	67.00 (d)	28.00
Avon	7.00	22.00 (d)	20.00
Carondelet	8.00	43.00 (d)	20.00
Anniston	2.00	47.00 (d)	14.00
Monsanto, Tennessee	5.00	56.00 (d)	21.00
Trenton	1.50 (d)	44.00 (d)	26.00
Monsanto, Idaho	20.00	113.00 (d)	12.00
Everett	9.00	91.00 (d)	22.00
Camden	3.00	21.00 (d)	93.00
Springfield	8.00	48.00 (d)	14.00
Port Plastics	8.00	100.00 (d)	31.00
Texas City	5.00	65.00 (d)	17.00
Seattle	1.00	1.00 (d)	71.00
Long Beach	10.00	10.00 (d)	29.00
Santa Clara	6.00	7.00 (d)	111.00

The Accounting Department will review the above figures once a year and change, if change is required.

Other methods of allocating the investment of non-manufacturing facilities should be used whenever the nature of the project indicates the need of greater accuracy.

The sales price used in calculating annual net sales is the estimated selling price less any freight paid or allowed.

In requests relating to projects for changing existing facilities in order to lower operating costs, rather than to increase production and sales, the statement of estimated new earnings should show "Existing Production Cost" and "Future Production Cost." The difference between the two will give "Net Income Before Income Taxes."

In requests relating to projects involving both a change in production and a change in unit production cost, the statement of new earnings should show

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an estimate of present annual earnings and an estimate of future annual earnings. The difference between the two will give the estimate of annual new earnings. It also may be necessary to show both present and future capital values.

In the estimate of new earnings, the percentage of annual net sales to be deducted from gross profit for "Selling, Administrative and Research Expense" varies with the divisions. Present percentages are as follows:

Division	Per Cent
Organic Chemicals	10.
Inorganic Chemicals	7.
Plastics	13.

The per cent of income tax to be used may be changed from time to time by the Controller in accordance with changes in the Revenue Act.

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