CONTENTS

Executive Orders

EXECUTIVE ORDER NO. 94

WHEREAS, the State of Louisiana is committed to the improvement of higher education for its citizens; and

WHEREAS, it is essential to involve the academic community and its resources in the effort to continually upgrade the quality of higher education offered the citizen-consumers of Louisiana; and

WHEREAS, it is necessary for this purpose to increase student knowledge of and participation in the decisions which most affect them as the citizen-consumers of higher education; and

WHEREAS, carefully structured experiential learning is a recognized educational advantage; and

WHEREAS, mutual benefits to higher education and State government will accrue from a service-learning relationship;

NOW, THEREFORE, I hereby create the Louisiana Student Government Commission, to be composed of the presidents of the student government associations representing each four-year degree granting public college and university, for the purpose of collecting information and reports relative to student affairs from State agencies and institutions, publishing an official publication, and serving as an advisory board on student affairs to the Board of Regents, the L.S.U. Board of Supervisors, the Southern Board of Supervisors and the State Board of Trustees.

AND BE IT FURTHER RESOLVED, I do hereby establish a Student Internship Program to be administered by the Board of Regents. At a minimum, the program is to strive for academic excellence and faculty review of student participants' performance.

The Board shall provide stipends not to exceed three thousand dollars per semester for each intern. To assist in the administration of the program, the Louisiana Student Government Commission, with the concurrence of the Board of Regents, shall name a committee of academic deans/vice presidents or their representatives to propose criteria for the selection and placement of student interns and faculty review of their on-the-job performance; to determine in the case of each intern whether credit will be allowed, and if credit is to be allowed, to what extent. Each intern shall submit a written report each semester to the Commisttee outlining the nature of his activities and their relevance to the degree he is pursuing. The Student Government Commission shall conduct a survey of State agencies periodically to determine the agencies' needs for interns and what qualifications each agency would require. The results of all surveys shall be forwarded to the Board of Regents at a time it specifies. The Board of Regents, after reviewing the results of the survey and the qualifications of interns recommended by the Committee of Academic Deans/Vice Presidents, shall determine the State agencies in which interns shall be placed. The Board of Regents, with the advice and consent of the Committee of Academic Deans/Vice Presidents, and the Louisiana Student Government Commission, shall establish criteria for the selection of interns, but once the criteria are approved, the final selection of interns shall be determined solely by the Committee of Academic Deans/Vice Presidents, provided, however, that the Committee shall not approve an intern who fails to meet the criteria. Funds appropriated for operating expenses of the Louisiana Student Government Association, as provided in Act 16 of the Regular Session of 1975, shall be used to defray expenses of the Student Government Commission and the Student Intern Program. The Division of Administration shall assign quarters to the Commission. The Louisiana Student Government Commission shall employ an Executive Director whose salary shall not exceed twelve thousand dollars per year and shall employ a secretary. The Board of Regents shall retain five thousand dollars of the funds appropriated to defray costs of administering the student intern program. The agencies receiving interns shall pay the minimum stipend of one hundred twenty-five dollars per month.

IN WITNESS WHEREOF, I have hereunto set my hand officially and caused to be affixed the Great Seal of the State of Louisiana, at the Capitol, in the City of Baton Rouge, on this the 3rd day of December, A.D., 1975.

EDWIN EDWARDS

Governor of Louisiana

Emergency Rules

DECLARATION OF EMERGENCY

Louisiana Health and Human Resources Administration
Division of Family Services

The Louisiana Health and Human Resources Administration, Division of Family Services, due to the amendment to R.S. 46:65 in the past legislative session, is revising policy relative to the confidentiality of information so as to conform to current State law. The revised policy provides the following:

A. Applications for assistance, and information contained in case records of clients of the Division of Family Services of the Louisiana Health and Human Resources Administration, shall be confidential and that it shall be unlawful for any person to solicit, disclose, receive, make use of, or to authorize, knowingly permit, participate in, or acquiesce in the use of applications or client case records or the information contained therein for any purpose not directly connected with the administration of the Family Services program.

B. Publication of lists of names of clients or applicants is prohibited.

C. The following information shall not be subject to waiver, and shall not be released to applicants, recipients, or outside sources, except those outside sources engaged in the administration of the Family Services program:

(1) Records pertaining to foster care of children, investigations of abuse or neglect of children, and other child welfare services.

(2) Information furnished to the Division of Family Services by persons, governmental agencies, or other legal entities when such furnisher of information is subject to a confidentiality statute or regulation which prohibits release of such information to an outside source. For this provision to be applicable the limitations of the furnisher's confidentiality statute should be indicated on the material.

(3) Information in case records pertaining to Food Stamp Program.

(4) Information contained in applications for assistance and case records that is furnished to law enforcement agencies or courts to aid in the prosecution of criminal offenses related to any Family Services program.

(5) Information pertaining to adoption of children shall be strictly confidential and shall not be released to courts of competent juirsdiction in accordance with existing laws.

(6) Information pertaining to foster care of children, reports and investigations on abuse or neglect of children, and records of other child welfare services, shall not be subject to subpoena in any judicial proceeding for legal separation, for divorce, or for custody of children incidental to a proceeding for legal separation or divorce; and in the event of the issuance of a subpoena for such information, or for any representative or employee of the Louisiana Health and Human Resources Administration to testify concerning an applicant or client in any such proceeding, the court's attention shall be called to this.

D. Confidential information may be released to an outside source, not directly connected with the administration of Family Services programs, only upon written request of the outside source and only after written waiver by the applicant, client, or his legal representative. Governmental authorities, the courts, and law enforcement agencies shall be considered the same as any other outside source. Confidential information may be released to an applicant, client, or his legal representative, provided that the applicant, client, or legal representative will be required to complete and sign a written waiver.

Because of the change in state law and the widespread effect this change will have, the policy is being amended effective December 1, 1975, under an emergency rule. This action was taken pursuant to R.S. 49:953 B. Copies of the emergency rule are available for public examination at the offices of the Louisiana Health and Human Resources Administration, Division of Family Services, 755 N. Riverside Mall, Room 201, Baton Rouge, Louisiana.

Roy E. Westerfield, Director
Division of Family Services

DECLARATION OF EMERGENCY

Louisiana Wildlife and Fisheries Commission

On November 18, 1975, the Louisiana Wildlife and Fisheries Commission adopted a resolution closing Lake Bistineau (Bossier, Webster, Claiborne Parishes) to all fish netting except minnow seines. This resolution is to be effective November 25, 1975.

The closure of Lake Bistineau to this fishing gear was considered by the Commission to be an emergency in view of the large numbers of fish being taken during the current drawdown period with the water level seven to eight feet below normal pool stage. Another reason for this action is the presence of striped bass. There were 490,000 striper fingerlings released in Bistineau in May, 1975. These fish have a considerable potential for increasing recreational fishing on the lake but are very susceptible to being taken in commercial gear.

Since the 1974 and 1975 fish population samples taken in Lake Bisteneau indicate the commercial fish poundage to be only seven to ten pounds per acre, the Commission was of the opinion no hardship would be imposed on commercial fishermen. This standing crop is to low to support a commercial fishery.

J. Burton Angelle
Director

Rules

RULES

Department of Agriculture
Milk Division

(Editor's Note: The following rules were adopted on December 10, 1975, to become effective on the same date that the Federal Orders 1094 and 1096 become effective.)

The following findings and conclusions on the material issues are based on evidence presented at the hearing and the record thereof:

1. Reduction of the size of the marketing area in Production Marketing Area No. 1. The Greater Louisiana Milk Marketing Area should include all parishes in the State of Louisiana except those now contained in the New Orleans Marketing Area and the three parishes of St. Tammany, Tangipahoa, and Washington. These conclusions can be reached on the basis of competition among handlers for the sales of packaged Class I products and for the competition of raw milk supplies among handlers that would be regulated under the proposed order and would participate in the marketwide pool.

Handlers regulated by the present Northern Louisiana Federal Milk Marketing Order operate under a marketwide pool under that Federal Order. These regulated handlers sell packaged Class I products in at least thirty-three parishes in Louisiana. These same handlers sell fifty percent or more of the Class I products in at least twenty-four Louisiana parishes. These handlers have more than half the sales in fourteen parishes in addition to all ten of the parishes now included in the Federal Order Marketing Area. Further, these same regulated handlers have more than a third of the sales in an additional four counties. Handlers in Lake Charles, Alexandria, and Lafayette compete directly with handlers in the Northern Louisiana Federal Milk Marketing Order Area. The direct competition between these groups of handlers results in Class I sales shifting from handlers regulated by Federal Order to handlers regulated only by State Order. Hence, producers may, from time to time, share in certain sales and lose these to other producers primarily due to competition among handlers. Hence, in order to have the continuous and equitable sharing, all of this area should be in the same marketing area that is regulated by a common marketwide pool.

2. Changing the pooling arrangements from an individual handler pool to a marketwide pool in Production Marketing Area No. 1. The evidence presented at the public hearing held on September 11, 1975 demonstrates the need for a marketwide pool in the proposed marketing area. Pooling of returns to producers on an individual handler basis, as presently provided for, does not permit the reserve milk supply for the market to share equitably in the Class I sales on a year-round basis; does not encourage or permit the most efficient handling of the market's milk supply; and results in different blend prices among producers supplying the market.

Almost without exception, when there is an excess supply of milk in an individual handler's plant, it is the cooperative's members who are asked by the handler to handle this extra milk. The cooperative must dispose of such milk as best it can; pay transportation and handling costs for moving the milk, and generally bear the total burden of the excess reserve supply for the market. Under individual handler pooling, when milk is moved out of a plant, such milk does not share in the returns

from the Class I sales of such handler. The associated producer provisions of the current State Order provide some degree of sharing when milk is moved out of these plants. However, such procedures are cumbersome and do not result in full equity in sharing of Class I sales in the market. Under an individual handler pool, milk dealers tend to receive only enough milk at their plants to meet immediate needs for fluid use and use in products such as cottage cheese. Milk dealers in Louisiana rely on cooperatives in varying degrees to meet their day-to-day and season-to-season fluctuation in supply needs. They arrange for the cooperative associations to supply them with milk at the time and in the quantities needed. Some milk handlers buy their full supply directly from cooperatives, while others receive some milk directly from producers and supplemental supplies from the cooperatives. In both instances, the cooperatives assume the burden of disposing of that milk which handlers do not have an immediate need for, but which represents a necessary reserve supply for the Greater Louisiana market.

One milk dealer may not need milk on a particular day, while another milk dealer may need an additional quantity on that same day. In these circumstances, the cooperative may take milk that regularly goes to the first dealer and deliver it to the second milk dealer. This is an efficient way of handling milk and tends to maximize fluid utilization on the market. Milk over and above the needs of fluid handlers must be disposed of elsewhere. Ordinarily, such disposition is made by the cooperative associations.

Under the proposed marketwide pool, the cooperatives would have the privilege of diverting extra milk to available outlets and have such milk share in the returns to producers in the marketwide pool. All producers on the market would then share at least part of the burden of the excess reserve of the market.

The existence of a marketwide pool in the New Orleans Marketing Area adjacent to the Greater Louisiana Marketing Area, with an individual handler pool, has created an unsatisfactory situation in Louisiana. Individual handler pooling causes handlers to restrict their purchases to about their plant's Class I needs so as to maintain a blend price at or near the same level as that of their competitors. This practice leaves the cooperative with little alternative but to pool the reserve milk for the Greater Louisiana Marketing Area into the New Orleans marketwide pool. The burden of maintaining the reserve milk supply for individual handler pool markets, such as Greater Louisiana, has rested on the New Orleans market. This further adds to the inequity that the regulations create among producers in Louisiana.

The Dairy Division of the United States Department of Agriculture has issued a recommended decision to extend the Northern Louisiana Area to encompass all of the State of Louisiana except the area recommended to be included in the New Orleans Federal Milk Marketing Order. The recommended decision for the Greater Louisiana Area includes a marketwide pool. If such Federal Order were to become effective for the recommended marketing area, then the provision of marketwide pooling in the Louisiana State Order would certainly make the regulations between the State and Federal government much more compatible. This is another reason why the Greater Louisiana Marketing Area should have a marketwide pool.

The foregoing precisely describes the situation in Louisiana as it relates to milk marketing in the Greater Louisiana Marketing Area and in the New Orleans market as it affects the Greater Louisiana market. Inclusion of a marketwide pool in the Greater Louisiana Marketing Area would add stability and provide needed equity among all producers supplying milk for this market. The record evidence clearly establishes the need for a marketwide pool in this area.

3. Amend the base plan as now contained in Production Marketing Area No. 1. On the basis of evidence in the record, a seasonal base excess plan should be maintained in the Greater Louisiana Milk Marketing Order. Most producers delivering to plants in this area are now operating under a base excess plan. Their production plans for making base for the coming year were established prior to the beginning of the base-forming period, which is September 1st. Certainly, it would not be proper to do away with a base excess plan without giving prior notice to producers. The base excess plan in this area should be continued in order to continue to have incentives for the production of milk during fall and winter months when Class I sales are at their highest relative to production. Such plans should be designed, as it has in the past, to discourage excess production during the spring months when production is seasonally high and Class I sales drop when schools close.

Incorporation of a base excess plan in the State Order for the Greater Louisiana Marketing Area could possibly result in some difference in the payments required of individual producers by the Federal Order marketwide pool without a base plan and the State Order pool with a base plan. Therefore, some provisions need to be made to prevent the base plan from requiring a handler to have a cost of milk higher than the use value of the utilization at this plant. This is particularly necessary whenever such added costs occurs as a result of conditions over which he had no control. For example, it is possible that a producer would have

production of excess milk sufficiently great, that the blend price required by the Federal Order would be greater than the value at the base-excess prices. In other words, the handler would have to pay a higher price under the Federal Order than required by the State Order. Under such conditions, handlers should be given a credit for any payment made as a result of the Federal Order to individual producers above the value calculated for such producers base and excess milk under this proposed State Order.

A base should be calculated for each producer who qualifies as a producer under the proposed order during the first month that this order becomes effective. Assignment of a base to each producer who so qualifies during this first month, would minimize the amount of conflict between this order and the recommended Federal Order for this same area.

A base plan should be made a part of the Greater Louisiana Marketing Order. Any time a handler is required to pay a greater value to a specific producer under the Federal Order than the value calculated as due such producer under this Order, then such handler would be given a credit for that amount in his obligations to the producer-settlement fund. If money is due such handler from the producer-settlement fund, then payments would offset such higher payment required by the Federal Order. After the first month of this Order, any dairy farmer that qualifies as a producer and had not qualified during the first month, that handler will be required to absorb any additional costs under the Federal Order by qualifying that producer under the State Order. Such costs would be borne until the end of the base operating period.

4. Add the parishes of St. Tammany, Tangipahoa, and Washington to Production Marketing Area No. 2. St. Tammany, Tangipahoa, and Washington parishes should not be included in the Greater Louisiana Marketing Area. Rather, these three parishes should be included in the New Orleans Milk Marketing Area. Competition for packaged milk sales and for the procurement of raw milk supplies strongly tie these three parishes to the New Orleans Marketing Area. The main argument of producers supplying plants in this area for having these parishes as part of the Greater Louisiana Area rather than in the New Orleans Area is that they would receive a higher blend price. First, this is not an appropriate basis for defining a marketing area, and, secondly, with the expansion of the New Orleans Federal Milk Marketing Order Area to include the large area of Mississippi, as recommended by the U.S.D.A. in a recent decision, makes it impossible to determine specifically where the higher blend price will be. The parishes of St. Tammany, Tangipahoa, and Washington should be included in the New Orleans Milk Marketing Area because the community of competition for the sale of packaged milk is between handlers now regulated by the New Orleans Order and local handlers in these three parishes, plus two handlers from Baton Rouge, Louisiana. As indicated by one handler in the record, he competes with five handlers regulated by the New Orleans Order and two from Baton Rouge, Louisiana. One of the Baton Rouge handlers is the Borden Company, which also has a plant in New Orleans. Actual competition is with a distributor now being supplied by the Borden, Baton Rouge plant. This same distributor had previously been supplied out of the New Orleans Borden plant. The shift occured about the time the New Orleans Federal Order price went above the State Order price. By an administrative decision of the Borden Company, this competition changed quickly and could, by similar decision, revert back to being supplied by the New Orleans handler.

The parishes of St. Tammany, Tangipahoa, and[1] Washington are a significant part of the New Orleans milkshed. Supplemental milk supplies for the local handlers in St. Tammany and Washington Parishes are obtained from the same sources that regularly supply the New Orleans handlers. Further, seasonal surplus of these same local handlers are made to the same manufacturing outlets serving the New Orleans market.

5. Conforming changes in other order provisions. In order to implement a marketwide pool, a number of conforming changes must be made in the Order. These changes involve such provisions as the definition of a pool plane, operation of Producer-Settlement Fund, payments into and out of a Producer-Settlement Fund, and calculation of marketwide blend prices and marketwide uniform base excess prices.

This decision will become effective on the same date the Federal Order 1094 and 1096 becomes effective.

Dave L. Pearce
Commissioner

RULES

Louisiana Cemetery Board

(Editor's Note: The following rules were adopted by the Louisiana Cemetery Board on November 12, 1975, to be effective on December 20, 1975.)

Description of the Louisiana Cemetery Board In compliance with R.S. 49:952(1)

The Louisiana Cemetery Board was created by Act 417 of 1974 of the Louisiana Legislature. This Act now constitutes Title 8 of the Louisiana Revised Statutes, consisting of Chapters 1 through 13, both inclusive, Sections 1 through 904, both inclusive.

The Board is composed of seven members appointed by the Governor. Five of the members of the Board shall be from each Public Service Commission district existing at the time of their appointments, and two of the members shall be from the public at large. All seven members shall be residents of the State of Louisiana. The five members to be appointed from the existing Public Service Commission districts shall be selected by the Governor from lists submitted to him by the Louisiana Cemeteries Association, Inc. The two at-large members shall not have any direct or indirect interest in either the cemetery or funeral business. Appointments shall be for a four year term, except for the initial members of the Board whose terms shall be as set forth in R.S. 8:61A.

The domicile of the Board is the Parish of Orleans, where it maintains its administrative office.

The Louisiana Cemetery Board is vested with all of the powers, duties, and responsibilities contained in Title 8, Louisiana Revised Statutes. Generally, the Board enforces and administers the provisions of Title 8. In particular, the Board receives and processes applications for certificates of authority, licenses to engage in the business of a cemetery sales organization and/or a cemetery management organization, inspects and examines perpetual or endowed care funds of perpetual or endowed care cemeteries, examines the reports of merchandise trust funds, carries out the provisions of Title 8 concerning the issuance, renewal, suspension, revocation, and reinstatement of all certificates and licneses provided for therein, and performs such other functions and duties as are reasonably required in the enforcement and administration of Title 8, Louisiana Revised Statutes.

The public may obtain information or make submissions or requests by writing or otherwise contacting the secretary of the Board at its office in the City of New Orleans. The mailing address of the Board is:

Post Office Drawer 19925
New Orleans, Louisiana 70179.

Rules and Regulations

Part 1 – General Provisions

Section 1. Authority

These rules and regulations are adopted and promulgated by authority of, and in accordance with, the Louisiana Administrative Procedures Act, being Louisiana Revised Statutes, Title 49, Sections 951 through 966, both inclusive, and Act 417 of 1974 of the Louisiana Legislature, being Title 8, Chapters 1 through 13, both inclusive, Sections 1 through 904, both inclusive, of the Louisiana Revised Statutes, as they may from time to time be amended.

Section 2. Definitions

There is incorporated herein by reference all of the definitions set forth and contained in R.S. 49:951 through R.S. 49:966, both inclusive, and in Title 8, Louisiana Revised Statutes. The following words and terms, when used in these rules and regulations, shall have the following meanings unless the text hereof or the definitions contained in the above cited statutes clearly indicate otherwise.

(a) "Board" means the Louisiana Cemetery Board.

(b) "Title 8" or "Louisiana Cemetery Act" means Act 417 of 1974 of the Louisiana Legislature, being all of Title 8 of the Louisiana Revised Statutes, as the same may from time to time be amended.

(c) "Act" or "Louisiana Administrative Procedures Act" means Sections 951 through 966, both inclusive, of Title 49 of the Louisiana Revised Statutes, as the same may from time to time be amended.

(d) "Presiding officer" means the chairperson of the Louisiana Cemetery Board or a member of the Louisiana Cemetery Board appointed by him to preside over a rule-making or adjudication proceeding to be conducted by the Board.

Section 3. Officers of Board

(a) The officers of the Board shall be a chairperson, a vice-chairperson, and a secretary-treasurer. The Board may designate and elect such other officers as it shall determine. All officers shall be elected from among the members of the Board, and shall perform such duties as shall be prescribed by the Board.

(b) Officers shall be elected to serve for a period of one year or until their successors are elected. Their term

of office shall begin at the close of the meeting at which they are elected.

(c) No member shall hold more than one office at a time, except that one member may serve as secretary--treasurer. An officer may serve consecutive terms.

Section 4. Meetings, Quorum

(a) Regular meetings of the Board shall be held at least twice a year, at such times and places as shall be determined by the Board. Special meetings may be called by the chairperson and shall be called upon the written request of any three members of the Board.

(b) Written notice of all meetings shall be sent by the Secretary to each member of the Board at least ten days prior to the date on which the meeting is to be held. In cases of emergency, a minimum of three days notice shall be given.

(c) Four members of the Board shall constitute a quorum.

Section 5. Committees

(a) The Executive Committee shall consist of the officers of the Board.

(b) There shall be the following standing committees:

(1) Administrative Committee;
(2) Examination and Inspection Committee;
(3) Rules and Regulations Committee.

(c) Such other committees, standing or special, shall be appointed by the Board or by the chairperson of the Board, as the Board or chairperson shall from time to time deem necessary to carry on the work of the Board. All appointments to committees, standing or special, other than the Executive Committee, shall be made by the chairperson. The chairperson shall be ex officio a member of all committees, and as such, he shall have the same rights as the other committee members, including the right to vote, but he shall not be counted in determining whether a quorum is present.

Section 6. Parlimentary Authority; Order of Business

(a) The rules contained in the current edition of *Roberts Rules of Order* shall govern the Board in all cases to which they are applicable and in which they are not inconsistent with these rules and regulations and any special rules of order or procedure that the Board may adopt. The Board may vary, modify, or deviate from such rules of order whenever it shall deem it necessary or advisable to do so.

Section 7. Computation of Time

(a) In computing a period of time allowed or prescribed by these rules and regulations, by law or by order of the Board, the date of the act, event or default after which the period begins to run is not to be included. The last day of the period is to be included, unless it is a legal holiday or a day of the weekend, in which event the period runs until the end of the next day which is not a legal holiday or a day of the weekend.

(b) A half-holiday is considered as a legal holiday. A legal holiday or day of the weekend is to be included in the computation of a period of time allowed or prescribed, except when:

(1) it is expressly excluded;
(2) it would otherwise be the last day of the period; or
(3) the period is less than seven days.

Section 8. Amendment of Rules and Regulations

These rules and regulations may be amended, and any such amendments shall become effective, in accordance with and as provided by the Louisiana Administrative Procedures Act, and particularly, but without limitation, R.S. 49:953 and R.S. 49:954.

Section 9. Appearances

(a) No person, except an individual appearing in his own behalf or as a witness on behalf of a party, shall be permitted to participate in any proceeding before the Board unless such person is represented by an attorney of this state in good standing.

(b) Any attorney or counselor from any other jurisdiction, of good standing there, may, at the discretion of the Board be admitted, pro hac vice, to associate with an attorney of this state in a proceeding and to participate therein in the same manner as an attorney of this state, provided, however, that all pleadings, briefs, and other papers filed with the Board in such matters shall be signed by an attorney authorized to practice in this state who shall be held responsible for them and who shall be present at all times during the proceeding unless excused by the presiding officer.

(c) Any person appearing before or transacting business with the Board in a representative capacity may be required by the Board or the presiding officer to file evidence of his authority to act in such capacity.

Section 10. Formal Requirements for Pleadings

(a) All pleadings shall be printed or typewritten and shall be prepared on either letter size or legal size paper.

(b) All pleadings must be signed in ink by the attorneys of record, if any. Pleadings filed by a party acting on his own behalf shall be signed by such party.

(c) All pleadings initiating a preceeding or otherwise seeking affirmative relief, all answers and all petitions of intervention shall be verified, except for those matters initiated or petitions or orders to show cause brought by the Board or upon the motion of the Attorney General of the State of Louisiana.

Section 11. Statutory References in Pleadings

(a) All pleadings, except those filed by the Board, shall cite by appropriate reference the statutory provision or other authority under which the Board's action is sought, and shall refer to any statutes, rules, regulations, decisions, orders, and/or opinions germane to the particular matter or proceeding involved.

Section 12. Ex Parte or Emergency Relief

(a) If a petition or other pleading filed by a person other than the Board seeks ex parte action or the granting of emergency relief pending full hearing, it shall set forth the necessity or emergency for such requested action and must be supported by affidavits to make a prima facie case.

(b) The Board may take emergency action upon compliance with the appropriate provisions of the Louisiana Adminiatrative Procedures Act.

Part 2 – Rule-making Procedure

Section 1. Proceedings by the Board

(a) The Board may initiate proceedings for the promulgation, amendment or repeal of any rule. Such proceedings shall be conducted in accordance with the Louisiana Administrative Procedures Act, and particularly but without limitation, R.S. 49:953 and R.S. 49:954.

(b) The Board will maintain a list of persons who have made timely requests for advance notice of its rule-making proceedings, and will give notice to such persons by certified mail in accordance with R.S. 49:953A(1).

Section 2. Initiation of Proceedings by Interested Persons

(a) Any interested person may petition the Board requesting the adoption, promulgation, amendment, or repeal of a rule. The petition shall be filed by mailing same to the Board at its administrative office in the City of New Orleans.

(b) A petition filed in accordance with this section shall contain the following:

(1) the names and addresses of the petitioners;
(2) the names and addresses of the attorneys, if any, of petitioners;
(3) all pertinent allegations of fact, views, arguments, and reasons supporting the action sought by the petition;
(4) a statement or prayer expressing the action sought by the petition.

(c) Within ninety days after submission of a petition under this Part 2, the Board shall either deny the petition in writing, stating the reasons for the denial, or shall initiate rule-making proceedings in accordance with the Louisiana Administrative Procedures Act. Such proceedings shall be conducted in accordance with the procedures set forth in R.S. 49:953 and R.S. 49:954.

Part 3 – Certificate or License

Section 1. Applications

(a) All applications for any certificate of authority or license necessary or required by the Louisiana Cemetery Act shall be submitted to and filed with the Board at its administrative office in the City of New Orleans, whether or not the applicant believes himself to be exempt from the provisions of the Louisiana Cemetery Act, and must be accompanied by the charge, fee, or other sum provided for in said Act, which requirement may be waived by the Board. Payment of such charge, fee, or other sum shall be by check or money order made payable to the Louisiana Cemetery Board. If the Board determines that the applicant is exempt from obtaining a certificate of authority or license, it shall so inform the applicant and return to the applicant the charge, fee, or other sum forwarded with the application.

Section 2. Forms and Instructions

(a) All applications required by Section 1 of this Part shall be on the forms provided by the Board, and shall be prepared and filed in accordance with the instructions issued by the Board.

(b) The forms and instructions shall be prepared by the Board and shall contain such instructions and call for such information as may be useful to the Board in the administration and enforcement of the Louisiana Cemetery Act. Forms and instructions may be obtained by any interested party upon written request to the Board.

Section 3. Other Provisions Concerning Certificate or License

(a) A certificate or license shall be valid for the period of time stated thereon, unless it shall have been sooner suspended or revoked. Each certificate of authority for the operation of a cemetery must be displayed on the premises of the cemetery authority, and each license for the conduct of other businesses subject to the provisions of the Louisiana Cemetery Act shall be exhibited on reasonable request.

(b) A certificate of authority may be transferred upon compliance with the provisions of the Louisiana Cemetery Act and particularly, but without limitations, R.S. 8:76. All other licenses provided for by the Louisiana Cemetery Act shall be nontransferable.

(c) All certificates and licenses provided for by the Louisiana Cemetery Act shall be renewed prior to the expiration date shown thereon. Requests for renewal shall be on forms provided by the Board and shall be accompanied by the charge, fee, or other sum fixed by the Board.

(d) Every cemetery authority and every person who has been determined by the Board to be exempt from obtaining a certificate of authority or license, as the case may be, shall immediately notify the Board of any fact, circumstance, condition, or change in status or mode of operation which might result in the loss of the previously granted exemption. The Board may from time to time require submission of such information as it may deem necessary to determine if an exemption previously granted should be continued.

Section 4. Refusal to Grant Certificate or License

(a) If the Board refuses to grant any certificate or license applied for under the Louisiana Cemetery Act, it shall give written notice of its decision, with the reasons therefor, within ten days thereafter.

(b) An applicant for a certificate of authority shall have fifteen days after receipt of notice of the denial in which to initiate an adjudication proceeding. If no such proceeding is initiated, the action of the Board shall be final.

(c) If the Board intends to deny an application for a license to engage in the business of a cemetery sales organization or a cemetery management organization, the Board shall give the applicant for such license the notice required by R.S. 8:406, and shall initiate an adjudication proceeding as otherwise provided for in these rules and regulations.

Section 5. Revocation or Suspension of Certificate or License

(a) Upon receipt of information of facts or conduct that would, in the opinion of the Board, constitute grounds for revocation or suspension of a certificate or license, the Board shall comply with the provisions of the Louisiana Administrative Procedures Act regarding the revocation, suspension, annulment or withdrawal of any license, and particularly but without limitation, R.S. 49:961. A holder of a certificate or license shall have fifteen days from receipt of the notice required by R.S. 49:961C in which to show compliance with all lawful requirements for the retention of his certificate and/or license.

(b) If the Board, after considering all of the facts and information at hand, is of the opinion that the subject certificate or license should be revoked or suspended, it shall issue an order accordingly, which order shall be served upon the certificate holder or licensee in the manner provided for in Part 4, Section 4, of these rules and regulations.

(c) An aggrieved certificate holder or licensee shall have fifteen days after receipt of the order revoking or suspending his certificate or license in which to initiate an adjudication proceeding. If no such proceeding is initiated, the order of the Board shall be final.

Part 4 – Proceedings Other Than Rule-making; General Procedural Rules

Section 1. Proceedings by the Board

(a) Proceedings initiated by the Board, except for the promulgation, amendment, or repeal of a rule, shall be commenced by the issuance of an order to show cause directed to the respondent. Such order shall state the acts, conduct, or the failure or omission to act alleged to be contrary to or in violation of any provision of law or of any of the lawful rules, regulations, orders, decisions, or opinions issued, rendered, and/or promulgated by the Board.

Section 2. Proceedings by Persons Other than the Board

(a) Any person desiring to initiate adjudication proceedings and who is entitled or required by law to do so shall prepare and file with the Board a petition which shall:

(1) Be in the form and content as set forth in Part 2, Section 2(b);
(2) State the name and address of each respondent;
(3) Contain supporting evidentiary material including, whenever applicable and possible, particular reference to the statute, rule, regulation, order, decision, or opinion involved.

(b) Any person desiring to initiate adjudication proceedings but who is not entitled or required by law to do so shall prepare and file with the Board a petition which shall meet the requirements of subparagraph (a) of this Section 2. If the Board shall determine that the petition is filed in good faith, that the petitioner would be entitled to relief if the allegations of his petition are established and that such allegations otherwise justify the initiation of an adjudication proceeding, the Board shall initiate an adjudication proceeding in accordance with this Part 4 of these rules and regulations.

Section 3. Notice

(a) Upon the issuance of an order to show cause by the Board, or upon the initiation of adjudication proceedings pursuant to a petition filed by any person in accordance with this Part 4, the Board shall issue a notice in conformity with the provisions of R.S. 49:955.

(b) The hearing set by such notice shall be fixed not less than twenty nor more than thirty days from the date of such notice.

Section 4. Service of Notice; Pleadings, and Other Documents

(a) Unless otherwise directed by the Board, service of such notice, and of all pleadings, decisions, orders, and other papers and documents shall be made, and shall be deemed valid if made, by delivering one copy to each party or his attorney of record in person or depositing it in the United States mail, first class, postage prepaid, certified or registered mail, return receipt requested, directed to the party or his attorney of record at his post office address. Service by mail shall be deemed complete at the date of mailing.

(b) Unless otherwise provided, when any party has appeared by attorney, service upon such attorney shall be deemed valid service upon the party until notice of dismissal of such attorney is received in writing by the chairperson of the Board or its subordinate presiding officer and served on all parties of record to the proceeding.

Section 5. Answer or Appearance

(a) A respondent may file his answer or other appearance personally or through an attorney not later than five days before the date fixed for the hearing.

(b) The filing of an answer or other appearance by an attorney constitutes an appearance by the party for whom the pleading is filed, and also constitutes an appearance of the attorney on behalf of such party. An attorney who has appeared on behalf of a party may withdraw from any proceeding upon good cause shown to the Board and upon written notice to the Board.

Section 6. Contents of Answer

(a) The answer shall contain:

(1) A specific admission, denial, or explanation of the matters and things alleged in the order to show cause or the petition, or if the respondent is without knowledge, he shall so state to that effect, such statement operating as a denial; admissions or denials may be to all or part of an allegation but shall squarely meet the substance of an allegation.

(2) A specific detailed statement of any affirmative defense or matter in extenuation or mitigation;

(3) A clear and concise statement of the facts and matters of law relied upon constituting the grounds of the defense or the basis for extenuation or mitigation. Any allegations of the order to show cause or the petition not denied in the answer shall be deemed admitted and may be so found by the Board.

Section 7. Default in Answering or Appearing

(a) In the event of the failure of a respondent to answer or otherwise appear within the time allowed, and provided that these rules and regulations relative to service and notice have been complied with, such respondent failing to answer or otherwise appear shall be deemed to be in default. At the time fixed for the hearing, the party initiating the proceeding shall present its evidence and in due course, and after due consideration of all of the pleadings, evidence and the entire record, the Board shall render its decision or issue its order or ruling, as appropriate.

Section 11. Procedure in Adjudication

(a) In the conduct of an adjudication, as defined in R.S. 49:951(1), the Board shall conform to and comply with, and shall conduct such adjudication in accordance with, the applicable provisions of the Louisiana Administrative Procedures Act, and particularly, but without limitation, R.S. 49:955 through R.S. 49:965, both inclusive, and the terms, conditions, and provisions thereof, dealing with such matters as notice, hearing, records, rules of evidence, oaths and affirmations, subpoenas, depositions and discovery, decisions and orders, rehearings, judicial review, appeals, and all other matters included in such statutory provisions which are specifically incorporated herein and made part hereof as rules and regulations of this Board.

Section 12. Judicial Review of Adjudication

(a) Judicial review of a final decision or order in an adjudication proceeding shall be in accordance with, and is governed by R.S. 49:964.

(b) The party seeking such judicial review shall cause to be prepared, and shall transmit to the reviewing court, the original or a certified copy of the entire record of the proceeding under review. All costs of preparing and transmitting the record for review shall be borne by the party prosecuting such appeal.

Section 13. Informal Proceedings Authorized.

(a) Nothing in these rules and regulations shall be construed as prohibiting the Board from holding informal proceedings, hearings, or conferences for the purpose of aiding the Board in ascertaining and determining facts necessary for the performance of its duties. Any person who is aggrieved by any action or determination of the Board following such an informal proceeding, hearing, or conference, and who is otherwise entitled thereto, may file a petition requesting the promulgation, amendment, or repeal of a rule, or may file a petition to initate an adjudication proceeding, under applicable provisions of these rules and regulations. Such petition for exercise of the rule-making process or for an adjudication shall be handled by the Board de novo.

Part 5 – Declaratory Orders and Rulings

Section 1. Right to Seek Order or Ruling; Procedure

(a) Any person entitled by law or by these rules and regulations may seek from the Board a declaratory order or ruling on the applicability of any statutory provision or of any rule or order of the Board.

(b) A request for a declaratory order or ruling shall be by petition filed with the Board at its administrative office. Such petition shall set forth in clear and concise language all facts, circumstances and relevant information as to the necessity for such ruling or order, and shall make specific reference to the statutory provision, rule, or order of the Board about which the declaratory order or ruling is requested. Within forty-five days of the receipt of all necessary information from the petitioner for a declaratory order or ruling, the Board shall issue its order or rule; provided, however, that the Board may, if it deems it to be in the public interest, refer the petition for declaratory order or ruling to the Louisiana Attorney General for a formal opinion. In such event, the Board shall render its order or rule, based upon the opinion of the Attorney General, within twenty days from receipt of such Attorney General's opinion.

(c) Pending the issuance of the requested order or rule by the Board, all proceedings and actions connected with the matter submitted to the Board shall be held in abeyance or stayed.

Section 2. Declaratory Judgment for Determining Validity or Applicability of a Rule

(a) The validity or applicability of a rule may be determined in an action for declaratory judgment in the Civil District Court for the Parish of Orleans as provided for in the applicable provisions of the Louisiana Administrative Procedures Act, and particularly but without limitation, R.S. 49:963.

Section 3. Informal Opinions

Nothing in this Part 5 shall be construed as prohibiting the Board from rendering an informal or advisory opinion to any person on any matter arising out of the administration or enforcement of the Louisiana Cemetery Act.

Part 6. – Construction; Divisibility

Section 1. Construction; Divisibility

(a) If any provision of these rules and regulations or the application thereof is held invalid, the remainder of these rules and regulations or other applications of such provisions shall not be affected. No subsequent amendment, modification or revision of these rules and regulations shall be held to supercede or modify the provisions hereof except to the extent that such amendment, modification, or revision shall do so expressly.

John M. Ellis, Jr.
Chairman

RULES

Board of Trustees for State Colleges and Universities

(Editor's Note: The following rules were adopted on November 14, 1975, to be effective December 20, 1975.)

PART I

Bylaws of the Board of Trustees for State Colleges and Universities

Article I

Definitions

A. College and University System: The term "college and university system," when used in these bylaws, shall refer to the system of campuses governed by the Board of Trustees for State Colleges and Universities, which includes:

1. Delgado Vocational-Technical Junior College at New Orleans
2. Grambling State University at Grambling
3. Louisiana Tech University at Ruston
4. McNeese State University at Lake Charles
5. Nicholls State University at Thibodaux
6. Northeast Louisiana University at Monroe
7. Northwestern State University of Louisiana at Natchitoches
8. Southeastern Louisiana University at Hammond
9. University of Southwestern Louisiana at Lafayette
10. Any other college, university, school, institution, or program now or hereafter under the supervision and management of the Board of Trustees for State Colleges and Universities.

B. The Board of Trustees for State Colleges and Universities: The "Board of Trustees for State Colleges and Universities," or "Board," as used in these bylaws, shall refer to the governing board of the college and university system and shall be composed of the Board of Trustees, duly appointed and qualified as provided by law.

C. President of the Board: The term "President of the Board" as used by these bylaws shall refer to the Board member who is duly elected President or Acting President of the Board.

D. Executive Director of the Board: The term "Executive Director of the Board," or "Director," as used in these bylaws shall refer to the duly appointed Director or Acting Director, who shall be the principal executive officer of the Board.

Article II

Meetings

Section 1. Regular Meetings.
The Board shall meet in regular session at least quarterly.

Section 2. Special Meetings.
Special meetings of the Board may be called by the President of the Board or upon receipt of a written request thereof signed by nine members and specifying the purpose of the desired meeting. Notification shall be sent by mail or telegraph to each member at least five calendar days before the time of the meeting.

Section 3. Quorum.
A majority of the Board shall constitute a quorum for the transaction of business at any regular or special meeting.

Article III

Officers of the Board of Trustees

Section 1. Election of Officers.
At the last regular or special meeting of the Board in the calendar year, the Board shall elect a President and a Vice-President. The President and Vice-President shall be members of the Board. Each of these officers shall hold office for one year or until a successor has been elected.

Section 2. President of the Board.
It shall be the duty of the President to preside at all meetings of the Board, to name the members of all standing and special committees of the Board, and to fill all vacancies in the membership of such committees, in accordance with the provisions of these bylaws.

Section 3. Vice-President of the Board.
In the absence of the President of the Board, it shall be the duty of the Vice-President to perform all duties of the President.

Section 4. Secretary of the Board.
The Executive Director of the Board shall serve as Secretary to the Board, to the Executive Com-

mittee, and to standing and special committees. He shall be appointed by and shall hold office at the pleasure of the Board and shall keep minutes of all Board and committee meetings.

Copies of all minutes, papers, and documents of the Board may be certified to be true and correct copies thereof by the Secretary.

Article IV

Section 1. Rules of Order.

When not in conflict with any of the provisions of this article, *Robert's Rules of Order* (latest revision) shall constitute the rules of parliamentary procedure applicable to all meetings of the Board.

Section 2. Order of Business.

The order of business for regular meetings of the Board shall be as follows:

A. Roll call and invocation.
B. Correction and approval of minutes of preceding regular meeting and of all special meetings held subsequent thereto.
C. Routine business.
D. Reports and recommendations of standing committees.
E. Reports and recommendations of special committees.
F. Reports and recommendations of the Director of the Board.
G. New business.

Section 3. Meetings.

All regular meetings of the Board shall be open except when otherwise ordered by the Board for the consideration of executive matters. No final or binding action shall be taken in a closed or executive session. At least ten calendar days prior to each regular meeting of the Board, the Director of the Board shall prepare and forward to each member of the Board a tenative agenda for the meeting. The Director shall place a particular item or subject upon the agenda upon the request of any member of the Board. All matters requiring action of the Board, however, may be acted on even though not carried on the agenda.

Section 4. Minutes.

The minutes of the meetings of the Board shall record official action taken upon motions or resolutions which are voted upon by the Board, and may contain a summary of report and pertinent discussion. In all cases when the action is not by a unanimous vote, the "ayes" and "nays" and abstentions of the individual members shall be recorded upon the request of any member of the Board. The remarks, personal views, or vote explanations of an individual member shall be included in the minutes only upon his request. The foregoing provisions relative to contents of the minutes shall in general also apply to minutes of committees of the Board. The minutes of meetings of the Board become official only when completed by the Secretary and approved by the Board. Official actions of the Board may be given to the press by the President of the Board or by the Director of the Board, after each meeting and prior to the completion or approval of the minutes.

Section 5. Reference to Committees.

In cases where practicable or desirable, before taking action on any subject or matter clearly within the sphere of any standing committee, the Board may refer such subject or matter to the appropriate committee, which committee shall submit its recommendations in writing together with any appropriate resolutions necessary to implement them.

Article V

Committees

Section 1. Executive Committee.

There shall be an Executive Committee consisting of the President, the Vice-President, and five other members appointed by the President from among the chairmen of the standing committees. The Executive Committee shall consider matters referred to it by the Board, shall execute orders and resolutions assigned to it by the Board, and shall take immediate action if an emergency requiring such action arises between Board meetings. All acts of the Executive Committee shall be submitted to the Board for ratification, or rejection, at its next meeting, except in matters in which the Board shall have delegated to the Executive Committee full power to act. Whenever the Board delegates to the Executive Committee full power to act with respect to any matter, affirmative action by a majority of the entire membership of the Executive Committee shall be required.

Section 2. Standing Committees.

Unless and until otherwise decided by the vote of a majority of the membership of the Board, the standing committees of the Board shall consist of the following:

A. Finance
B. Physical Plant
C. Academic Affairs

D. Student Affairs
E. Athletic

Section 3. Appointment and Term.

Members of all standing committees, one of whom shall be designated as chairman and one of whom shall be designated as vice-chairman, shall be appointed by the President of the Board within thirty days following his election as president. The term of committee appointees shall run concurrently with that of the President.

Vacancies occurring among the appointive members of any committees, however arising, shall be filled by the President of the Board for the remainder of the term.

Section 4. Meetings of Standing Committees.

It shall be the duty of the chairman of each committee to call and to preside over the necessary meetings. Whenever a report embodies recommendations for action by the Board, the chairman of the committee shall cause to be prepared appropriate accompanying resolutions.

The secretary of the Board shall keep minutes of all committee meetings. The minutes of each meeting of the committee, showing its action and recommendation, shall comply with the provisions of Article IV, Section 5.

Section 5. Quorum for Committee Meetings.

A majority of the members of any committee of the Board shall constitute a quorum for the transaction of business.

Section 6. Authority of Committees.

The authority of committees of the Board shall be subject to these bylaws and to the policies and direction of the Board.

Section 7. Finance Committee.

The Finance Committee shall consist of at least seven members of the Board. To this committee may be referred all matters related to financial and budgetary operations.

Section 8. Physical Plant Committee.

The Physical Plant Committee shall consist of at least seven members of the Board. To this committee may be referred matters relating to physical plants of the institutions under the control of the Board.

Section 9. Academic Affairs Committee.

The Academic Affairs Committee shall consist of at least five members of the Board. To this committee may be referred matters concerning academic organization, curricula, personnel, and other matters relating to faculty, scholarships, and other academic affairs.

Section 10. Student Affairs Committee.

The Student Affairs Committee shall consist of at least five members of the Board. To this committee may be referred all matters of policy concerning non-academic matters relating to student welfare.

Section 11. Athletic Committee.

The Athletic Committee shall consist of at least five members of the Board. To this committee may be referred all matters of policy concerning athletic programs.

Section 12. Special Committees.

As the need arises, the Board may create special committees with such function, powers, and authority as it may determine. Special committees shall be established for temporary periods not exceeding the term of the President. Unless otherwise provided by the action of the Board for such a committee, the President of the Board shall determine the number of its members, shall appoint the members, and shall designate the chairman.

Article VI

Duties, Powers, and Functions of the Board of Trustees

Section 1. General Duties.

It shall be the function of the Board to establish and maintain in each of the colleges and universities the highest quality of instruction in the various major branches of knowledge for graduates of the high school courses of study.

Section 2. Other Duties, Powers, and Functions.

In its supervision and management of the colleges and universities comprising the college and university system under its administration the Board shall have authority to:

A. Sue and be sued, including the right to recover all debts owing to the Board or any university or college under its management, and to retain legal counsel therefor.
B. Actively seek and accept donations, bequests, or other forms of financial assistance for educational purposes for any public or private person or agency and to comply with rules and regulations governing grants from the Federal

government or any other person or agency which are not in contravention of the constitution and laws.

C. Receive and expend or allocate for expenditure to the institutions under its jurisdiction all monies appropriated or otherwise made available for purposes of the Board and/or the institutions under its jurisdiction.
D. Borrow money and issue notes, bonds, or certificates of indebtedness for the same, and pledge fees, rents, and revenues to guarantee payment thereof, in accordance with law and with approval of the State Bond Commission.
E. Determine the fees which shall be paid by students.
F. Purchase land and purchase or construct buildings necessary for the use of the state colleges and universities in accordance with applicable laws.
G. Purchase equipment, properly maintain and make improvements to facilities necessary for the use of the state colleges and universities in accordance with applicable laws.
H. Lease land or other property belonging to it or to any college or university within its system in accordance with law.
I. Sell or exchange land or other property not needed for university purposes in accordance with law.
J. Employ or approve the employment, fix or approve the salaries, and fix or approve the duties and functions of personnel for the Board and the state colleges and universities.
K. Formulate curricula and programs of study.
L. Adopt, amend, or repeal rules and regulations necessary or proper for the business of the Board and for the government of the colleges and universities under its jurisdiction.
M. Adopt, amend, or repeal rules and regulations for the governance and discipline of students.
N. Affiliate with any institution giving any special course of instruction, upon such terms as the Board deems appropriate which terms may include the retention by such institution of the control of property, faculty, and staff.
O. Adopt, amend, or repeal rules and regulations pertaining to the conferring of degrees.
P. Enter into contracts and agreements with other public agencies with respect to cooperative enterprises and undertakings relating to or associated with college or university purposes and programs.
Q. Perform such other functions as are necessary or incidental to the supervision and management of the state colleges and universities.
R. Elect the heads of the various institutions.

Article VII

Staff of the Board of Trustees

Section 1. Executive Director

The person appointed by the Board as its Executive Director shall act as the chief administrative and executive officer of the state college and university system under its jurisdiction and shall serve as secretary to the Board, to the executive, and to the standing and special committees.

He shall be responsible to the Board for the conduct of the affairs of the system and shall be subject to control and supervision by the Board. He shall execute and enforce all of the decisions, orders, rules, and regulations of the Board with respect to the conduct of the system.

The duties of the Executive Director shall be to:

A. As secretary of the Board, receive all requests by the Board of Regents for information and all other communications relative to the exercise of that board's power and shall forward such to the President of the Board.
B. Perform such services assigned by the Board as may be necessary to accomplish the purposes for which the Board was established.
C. Maintain the office of the Board and insure the efficient functioning of the Board's staff.
D. Conduct continuing inquiry and studies into the problems of higher education.
E. Survey and study carefully the organization, management, and all other affairs of each institution under the control of the Board and report findings to the Board.
F. Recommend any changes that will increase efficiency and economy in the operation of each institution.
G. Compile and distribute to responsible officials copies of the laws, rules, and regulations for the governance of the state institutions of higher learning.
H. Employ, with the approval of the Board, members of the Board's staff.

Section 2. The Staff.

The Board shall authorize the employment of such personnel as may be required from time to time to carry out the function of the Board, and may assign to the personnel so employed such function and

duties as may be necessary to accomplish the purposes for which the Board was established.

A. The Finance Officer shall develop and maintain among the institutions a uniform system of accounts and financial reports, and shall supervise financial operations of the institutions as required by the Board, and shall assist the Executive Director in such other matters as may be required of him by the Board or the Executive Director.
B. The Academic Programs Officer shall assist the Executive Director in performing his function, primarily as that function concerns the academic affairs of the colleges and universities of the system. He shall familiarize himself with the programs offered by these institutions and stand ready as researcher to furnish information on such programs or make recommendations concerning program changes. He shall make himself particularly available to the Academic Affairs Committee and shall work closely with that committee and with the Executive Director in serving the academic needs of the institutions within the system.
C. The Educational Specialist and Legislative Liaison Officer shall perform specialized research when directed by the Board. He shall draft legislation and resolutions to be introduced in the legislative session and shall keep the Board informed of all pending legislation. He shall act as liaison for the Board during interim meetings of joint committees and during the regular and extraordinary sessions of the Legislature. He shall represent the Board when placing new policies and procedures in the State Register as required by Louisiana's Administrative Procedures Act of 1974 as amended (R.S. 49:951-966).
D. The Board Recorder and Records Supervisor shall record minutes of all meetings of the Board and of its committees. He shall file, index, and preserve carefully all minutes, papers, and documents pertaining to the business and proceedings of the Board and of its committees and shall be the custodian of all the records of the Board.
E. Other administrative and clerical assistants shall be employed by the Director upon approval of the Board.
F. The Board may employ on a fee basis such technical and professional assistance, including legal counsel, that may be necessary to carry out the powers, duties, and function of the Board.

Article VIII

Duties, Powers, and Functions of Presidents of Colleges and Universities

Section 1. The president of each college or university shall have authority to:

A. Administer all of the divisions and departments of his institution, keeping expenditures strictly in harmony with the budgetary authorizations of the Board and the laws and regulations of the State.
B. Take the initiative in shaping the educational policy and academic standards of his institution, in recommending such policies to the Board and in maintaining them subject to revision made by the Board.
C. Select and recommend for appointment by the Board all employees and faculty members of his institution, and fill vacancies that occur as emergencies, when the salary outlay is within the budget appropriations provided for such positions, all subject to approval by the Board, in which body rests the sole power of appointment and confirmation of employees.
D. Discontinue the employment of members of the faculty and staff, subject to the approval of the Board.
E. Establish and maintain appropriate standards of student conduct; expel, dismiss, and suspend students; place limitations on continued attendance; and levy penalties for disciplinary violations, subject to procedures of due process.

Article IX

Rights, Duties, and Responsibilities of the Academic Staff

Section 1. Academic Freedom

The college and university system is committed to the principle of academic freedom. This principle acknowledges the right of a teacher to explore fully within the field of his subject as he believes to represent the truth. The principle also includes the right of a member of the academic staff of the system to exercise in speaking, writing, and action outside the system the ordinary rights of an American citizen, but it does not decrease the responsibility and accountability which the member of the academic staff bears to the system, the state, and the nation.

Among the many implicit responsibilities which must be assumed by those enjoying the privileges of

academic freedom shall be that of refraining from insisting upon the adoption by students or others of any particular point of view as authoritative in controversial issues.

Section 2. Appointment to and Promotion of Academic Staff

Every appointment, promotion, and special salary increase of a member of the academic staff shall be upon the basis of merit and the special fitness of the individual for the work demanded by the position. All appointments, reappointments, promotions, and dismissals of members of the academic staff shall be made by the appropriate college or university president with comments as to approval or rejection by the Executive Director to the Board for its official action.

The terms of the appointment to the academic staff of each member shall be stated in writing and a copy thereof furnished to each of the contracting parties.

Section 3. Termination of Services of Tenured Academic Staff

Cause for discharge, termination of contract, or demotion in rank shall consist of conduct seriously prejudicial to the college or university system, deliberate infraction of law or commonly accepted standards of morality, failure to cooperate, neglect of duty, inefficiency or incompetence. The foregoing enumeration of causes shall not be deemed exclusive.

The president of each college or university shall appoint a standing committee of faculty members who shall hear charges brought against a member of the academic staff for termination of contract, discharge, or demotion in academic rank. A member of the academic staff so charged shall be entitled to a hearing before the said committee, and the charges against him shall be stated in writing and delivered to him five days prior to the hearing.

A member of the academic staff may further petition the Board for a review of charges brought against him, and no official action shall be taken by the college or university until completion of a hearing by the Board.

Further recourse may be had through appropriate court action in due process of law.

Section 4. Responsibilities of Academic Staff

It is a basic principle that every member of the academic staff, of whatever rank, shall at all times be held responsible for competent and effective performance of his duties.

Article X

Amendment or Repeal of Bylaws

New bylaws may be adopted, and bylaws may be amended or repealed, at any meeting of the Board, but no such action shall be taken unless notice of such proposed adoption, amendment, or repeal shall have been given at a previous meeting or unless notice in writing of the proposed change shall have been served upon each member of the Board at least thrity days in advance of the final vote upon such change, provided, however, that by a vote of two-thirds of the entire membership of the Board, the requirements for such notice may be waived at any time.

Article XI

Rules and Regulations of Board of Trustees

Section 1. Any action by the Board establishing policy or methods of procedure, administrative, business, academic, or otherwise, not contained in these bylaws shall be know as "Policies and Procedures of the Board of Trustees."

Section 2. Policies and Procedures of the Board of Trustees may be adopted by the Board, or may be amended or repealed, in whole or in part, at any meeting of the Board in accordance with law.

Part II

General Operating Procedures

Section 2.1 General Statement of Administrative Policy

The Board of Trustees shall determine broad administrative and educational policies for the conduct of all of its affairs and the affairs of the college and university system and shall provide for the execution of its policies by the presidents of the various colleges and universities and Board staff selected by the Board to hold office at its pleasure.

Section 2.2 Election of Officers

The Board shall elect from its membership a president and a vice-president whose terms of office are fixed by the Board.

Section 2.3 Compensation of Board Members

Each member of the Board shall be paid a per diem

of fifty dollars for each day of actual attendance at meetings of the Board or of a committee appointed by the Board on which the member serves, or while on business for the Board assigned by it, plus travel and other expenses incurred in the performance of official duties. Reimbursement of travel and expenses shall be in conformity with regulations governing such expenses of State officials.

Section 2.4 Board Meetings

A. Regular meetings of the Board shall be held at least quarterly. Ten calendar days' notice as ascertained from the postmark on the secretary's notice shall be designated as the notification time for regular meetings.

B. Special meetings of the Board may be called by the President of the Board or upon receipt of a written request therefor signed by nine members and specifying the purpose of the desired meeting. Notification shall be sent by mail or telegraph to each member at least five calendar days before the time of the meeting.

C. Quorum. A majority of the Board shall constitute a quorum for the transaction of business at any regular or special meeting. For any official action taken by the Board, a majority of the total membership of the Board must be present and vote.

D. A poll by mail or phone shall be authorized only when, in the opinion of the President of the Board, an extreme emergency exists.

Section 2.5. Presentation of Materials to the Board

A. All college and university presidents shall present their material, as well as the number of required copies, fifteen calendar days prior to the Board meeting in order that the agenda may be sent to the members of the Board ten calendar days prior to the meeting date.

B. All requests for leaves of absence must be in the office of the Board at least thrity calendar days before such action is planned, except in extreme emergency situations.

C. All personnel changes shall be incorporated in a single item to be brought before the Board for its action.

Section 2.6. Minutes and Recording

A. The record of proceedings of the Board, usually called the minutes, shall contain mainly a record of what was done at the meeting. The minutes should never reflect the secretary's opinion, favorable or otherwise, on anything said or done. A member shall have the privilege of explaining his vote and of entering this explanation into the record, if he so requests.

B. Tape recordings shall be made and kept of all official meetings of the Board.

Section 2.7. Committees

A. The Board shall have five standing committees
   1. Finance
   2. Physical Plant
   3. Academic Affairs
   4. Student Affairs
   5. Athletic

   Each committee shall be composed of at least five members appointed by the President.

Section 2.8. The rules of procedure of the Board shall be adopted from *Robert's Rules of Order* to fit the workings of the Board.

Section 2.9. Rules of Procedure of the Board of Trustees for State Colleges and Universities

The rules of procedure shall facilitate the systematic functioning of the Board.

A. Order of Business. The order of business of regular meetings of the Board shall be as follows:

1. Roll call and invocation.
2. Correction and approval of minutes of preceding regular meeting of all special meetings held subsequent thereto.
3. Routine business.
4. Reports and recommendations of standing committees.
5. Reports and recommendations of special committees.
6. Reports and recommendations of the Director of the Board.
7. New business.

B. Meetings, Recesses, Adjournments
   1. A meeting of the Board shall be a single official gathering of the members in one room or area to transact business for a length of time, called in accordance with the bylaws of the Board, during which there shall be no cessation of proceedings and the members do not separate, except for short recesses. Depending on the business to be transacted, a meeting may last from a few minutes to several hours and may be carried over for more than one day, if deemed necessary.
   2. A recess shall be a short intermission of a meeting which does not end the meeting or destroy its continuity as a single gathering, and after which proceedings are immediately resumed from the point of interruption.

Section 8. Leave to Intervene Necessary

(a) Persons, other than the original parties to any proceeding, whose interests are to be directly and immediately affected by the proceeding, shall secure an order from the Board or its subordinate presiding officer granting leave to intervene before being allowed to participate; provided, that the granting of leave to intervene in any proceeding shall not be construed to be a finding or determination of the Board or its subordinate presiding officer for purposes of judicial review or appeal.

(b) A petition for leave to intervene must clearly identify the proceedings in which the intervention is sought, must set forth the name and address of the petitioner for intervention, and must contain a clear and concise statement of the direct and immediate interest of the petitioner in such proceeding, stating the manner in which such petitioner will be affected by such proceeding, outlining the matters and things relied upon by such petitioner as a basis for his request to intervene, and if affirmative relief is sought, the petition must contain a clear and concise statement of the relief sought and the basis thereof.

(c) A petition to intervene and adequate proof of service of a copy thereof on all other parties of record to the proceeding shall be filed not less than three days prior to the commencement of the hearing. For good cause shown, the Board or its subordinate presiding officer shall allow a petition of intervention to be filed not later than the time of the hearing. If such petition to intervene is not filed in accordance with this Section, such petition will not be considered. If a petition to intervene shows direct and immediate interest in the subject matter of the proceeding or any part thereof, and does not unduly broaden the issues, the Board or its subordinate presiding officer may grant leave to intervene or otherwise appear in the proceeding with respect to the matters set out in the intervening petition, subject to such reasonable conditions as may be prescribed. If it appears during the course of a proceeding that an intervenor has no direct or immediate interest in the proceeding, and that the public interest does not require participation by such intervenor therein, the Board or its subordinate presiding officer may dismiss such intervenor from the proceeding.

Section 9. Pre-hearing Conference

(a) The Board or its subordinate presiding officer may, of its own volition, or upon the motion of any party of record, by giving seven days prior written notice of the time and place to all parties of record, hold a pre-hearing conference for the purpose of formulating or simplifying the issues, obtaining admissions of fact and of documents which will avoid unnecessary proof, arranging for the exchange of proposed exhibits or prepared expert testimony, limiting the number of witnesses, and considering such other matters as may expedite the orderly conduct and disposition of the proceeding, or the settlement thereof.

(b) The action taken at such pre-hearing conference and all the agreements, admissions, and/or stipulations made thereat by the parties concerned shall be made a part of the record and shall be approved by such parties. When so approved, such action shall control the subsequent course of the proceeding, unless otherwise stipulated by all parties of record with the consent of the Board or its subordinate presiding officer.

(c) In any proceeding, the Board or its subordinate presiding officer may, in its discretion, call all parties together for a conference prior to the taking of testimony, or may recess a hearing, after it has commenced, for the purpose of holding a conference.

Section 10. Hearing

(a) At the date, time and place fixed for the hearing, the Board shall hear all matters presented in connection with the proceeding pending before it. The hearing shall be conducted by the Chairperson of the Board or by a presiding officer who shall have been previously appointed by the Chairperson of the Board to conduct the hearing. The Board and all other parties may be represented personally or by counsel.

(b) Opportunity shall be afforded all interested persons to respond and present evidence on all issues of fact involved and arguments on all issues of law and policy involved and to conduct such cross-examination as may be required for a full and true disclosure of the facts.

(c) The Board or its subordinate presiding officer conducting any proceeding subject to this Part 4 shall have the power to direct, control, and regulate the order, procedure, and course of the hearing, including, but not limited to, opening statements, the order and method of presentation of testimony and evidence by all parties, and closing statements. The Board or its subordinate presiding officer shall have the further power to set the time and place for continued or recessed hearings, fix the time for filing of memoranda and other documents, and generally to do all things necessary and proper for the conduct of a full and fair hearing.

3. An executive session of the Board or its committees ordinarily shall be limited to matters dealing with personnel, security measures, and personal matters involving members of the Board. No official action shall be taken in executive session.
4. An adjournment shall terminate the meeting.

C. Establishing Agenda, Transacting Business, Considering New Matters
1. The secretary shall prepare a tentative agenda which shall be submitted to the members of the Board along with necessary documents at least ten calendar days prior to the date of the meeting.
2. A member may suggest, at a prior meeting or within the specified time before preparation and mailing of the agenda, any item to be included thereon.
3. A member may ask that new matters be considered and, if his request is agreed to, the Board may act thereon.
4. Formal action requires that any matter be submitted to the Board by motion duly seconded.
5. The Chair shall state the motion and call for discussion, after which the Board may act on such matters following repetition of the question by the Chair.

D. Motions
1. Main Motion–introduces items of the agenda to the Board.

Such motion:
a. Can only be made while no other motion is pending;
b. Can be applied to no other motion;
c. Is out of order when another motion is on the floor;
d. Must be seconded before it may be considered;
e. Is debatable;
f. Is amendable;
g. Requires a majority vote of the Board;
h. Can be reconsidered;
i. Is out of order if in conflict with national, state, or local law.
j. Is out of order if it presents substantially the same question as a motion previously rejected during the same meeting.

2. Subsidiary or Incidental Motion–adheres to a main question related to the main question in such a way that once introduced it must be decided before the main question can be decided. If more than one is introduced, motions must be considered in reverse order of introduction. While a main motion is pending, one or more subsidiary motion or incidental motion can be introduced and disposed of as an integral part of the main motion's consideration, or the introduction of one or more privileged motion can interrupt its consideration. All must be seconded before being considered. Types of subsidiary motions are as follows:
a. Amend–is a motion to modify the working, and within certain limits, the meaning, of pending motion before the pending motion itself is acted upon by:
(1) Word-by-word or phrase-by-phrase changes in the main motion, or
(2) A motion to substitute an entire new text of the main motion in place of the pending version.
b. Commit or Refer–is used generally to send a pending question to a committee or smaller group so that the question may be carefully investigated and put into better condition for the Board to consider.
c. Postpone to Certain Time–can defer action on pending question, within limits, to a definite day, meeting, or hour or until after a certain event. The subsidiary motion to postpone to a certain time:
(1) takes precedence over the main motion; over the subsidiary motions to postpone indefinitely, to amend and to commit; and over the incidental motions for division of question and for consideration by paragraph or seriatim;
(2) Can be applied to main motions, with any motions to postpone indefinitely, amend, or commit that may be pending;
(3) Is out of order when another motion is on the floor;
(4) Must be seconded;
(5) Is debatable;
(6) Is amendable as to the time to which the main question is to be postponed and as to making the postponed question a special order;
(7) Requires a majority vote;
(8) Can be reconsidered.
d. Limit or Extend Limits of Debate–is a means by which the Board can exercise special control over debate on a pending question.

e. Previous Question–is the motion to close debate and vote now (to call out "question" does not close debate, but to move the previous question does and requires a vote). Such motion:
   (1) Requires a simple majority vote;
   (2) Immediately closes debate and stops further discussion; and
   (3) Prevents the making of any other subsidiary motions.

f. Lay on the table–enables the Board to put aside the pending question temporarily when a more urgent matter has arisen. Such motion:
   (1) Takes precedence over all subsidiary motions and over incidental motions that are pending when it is made;
   (2) Can be applied to main motions;
   (3) Is out of order when another motion, other than the main motion, is on the floor;
   (4) Must be seconded;
   (5) Is not debatable;
   (6) Cannot be reconsidered.

g. Postpone indefinitely–kills the main motion for the duration of the meeting. Such motion:
   (1) Takes precedence only over the main question;
   (2) Can be applied only to the main question;
   (3) Is out of order when another motion is on the floor;
   (4) Must be seconded;
   (5) Is debatable;
   (6) Is not amendable;
   (7) Requires a majority vote;
   (8) Can be reconsidered if there is an affirmative vote; cannot be reconsidered if there is a negative vote.

3. Adjourn–adoption of any motion to adjourn closes the meeting immediately unless the motion specifies a later time for adjourning. The privileged motion to adjourn:

a. Takes precedence over all motions except the privileged motion to fix the time at which to adjourn;
b. Is not in order when the Board is engaged in voting or verifying a vote;
c. Is not applied to any motion, and no motion can be applied to it;
d. Is out of order when another motion is on the floor;
e. Must be seconded;
f. Is not debatable;
g. Is not amendable;
h. Requires a majority vote;
i. Cannot be reconsidered.

4. Suspension of rules of procedure–when the Board wishes to do something that it cannot do without violating one or more of its regular rules of procedure, it can adopt a motion to suspend the rules interfering with the proposed action, provided that the proposal is not in conflict with local, state or national law, or fundamental principles of parlimentary law. The incidental motion to suspend the rules:
   a. Can be made at any time that no question is pending;
   b. Can be applied to any rule of procedure of the Board;
   c. Is out of order when another motion is on the floor;
   d. Must be seconded;
   e. Is not debatable;
   f. Is not amendable;
   g. Requires majority vote of the membership;
   h. Cannot be reconsidered.

5. Division of a question–when a motion relating to a single subject contains several parts, each of which is capable of standing as a complete proposition if the others are removed, the parts can be separated to be considered and voted on as if they were distinct questions, by adoption of the motion for division of a question. The incidental motion for division of a question:
   a. Takes precedence over the main motion and over the subsidiary motion to postpone indefinitely;
   b. Can be applied to main motions and their amendments, if they are susceptible to division;
   c. Is out of order when another motion is on the floor;
   d. Must be seconded;
   e. Is not debatable;
   f. Is amendable;
   g. Requires a majority vote;
   h. Cannot be reconsidered;
   i. Shall be determined by the Chair if not clear.

6. Motions That Bring a Question Again Before the Board.

a. Take from the table–the object of the motion to take from the table is to make pending again before the Board a motion or a series of adhering motions that previously have been laid on the table. The motion to take from the table:
   (1) Takes precedence over no pending motion;
   (2) Can be applied to any question or series of adhering motions that lay on the table;
   (3) Is out of order when another motion is on the floor;
   (4) Must be seconded;
   (5) Is not debatable;
   (6) Is not amendable;
   (7) Requires a majority vote;
   (8) Cannot be reconsidered.

b. Rescind; Amend Something Previously Adopted–by means of the motions to rescind and to amend motions previously adopted, the Board can change an action previously taken or ordered. The motions to rescind and to amend a motion previously adopted:
   (1) Take precedence over nothing;
   (2) Can be applied to any main motion which has been adopted and to an affirmative result on an appeal, provided that none of the action involved has been carried out in a way which it is too late to undo;
   (3) Are out of order when another motion is on the floor;
   (4) Must be seconded;
   (5) Are debatable;
   (6) Are amendable;
   (7) Require majority vote of membership;
   (8) Can be reconsidered on a negative vote, but not on an affirmative vote.

C. Reconsider–a majority of the Board shall have the privilege, within a limited time and without notice, of bringing back for further consideration a motion which has already been adopted. The motion to reconsider:
   (1) Can be made only by a member who voted with the prevailing side;
   (2) Is subject to time limits of the same meeting in which it was voted;
   (3) Has a higher rank than its consideration; that is, the motion can be made and seconded at times when it is not in order for it to come before the Board for debate or vote;
   (4) Shall be entertained at a time specified by the Chair.

E. Personal privileges of each member of the Board–each member of the Board shall have the opportunity to speak on "personal privilege" following request by the member and recognition by the Chair. This privilege:
   1. Shall take precedence over all other motions except three: to recess, to adjourn, or to fix the time to which to adjourn.
   2. Cannot be applied to any other motion, and no subsidiary motion can be applied to it.
   3. Is in order when another has the floor if warranted by the urgency of the situation.
   4. Does not require a second.
   5. Is not debatable;
   6. Is not amendable;
   7. Is ruled upon by the Chair;
   8. Shall depend on the Chair's ruling as to admitting the request or motion that has been raised as a question of privilege; the Chair's ruling cannot be reconsidered.

F. Point of Order
   1. When a member of the Board feels the rules of the Board are being violated as to procedure, he can make a point of order request to the Chair, calling upon the Chair for a ruling and an enforcement of the regular rules. A point of order:
      a. Takes precedence over any pending question out of which it may arise;
      b. Can be applied to any breach of the Board's rules;
      c. Is in order when another has the floor, even if it interrupts a person, if the point genuinely requires attention at such time;
      d. Does not require a second;
      e. Is not debatable;
      f. Is not amendable;
      g. Is ruled upon by the Chair;
      h. Cannot be reconsidered.
   2. The Board, by electing a president or presiding officer, delegates to him the authority and duty to make necessary rulings on questions of procedure. But any two members have the right to appeal from his decision on such a question. One member making the appeal and the other seconding

it, the question is taken from the Chair and vested in the Board for final decision. Members have no right to criticize a ruling of the Chair unless they appeal his decision. An appeal:

a. Takes precedence over any question pending at the time the Chair makes a rule from which the appeal is made;
b. Can be applied to any ruling by the presiding officer except that if a point of order is raised while an appeal is pending there is no appeal of the Chair's decision on this point of order;
c. Is in order when another has the floor, but the appeal must be made at the time of the ruling;
d. Must be seconded;
e. Is debatable, unless it relates to the priority of business, is made during a division or standing vote of the Board, or is made while immediately pending question is undebatable;
f. Is not amendable;
g. Requires a majority or a tie vote to sustain the decision of the Chair;
h. Can be reconsidered.

G. Requests and inquiries

1. In connection with business in a meeting, members of the Board may wish to obtain information or to do or have something done that requires permission of the Board. Any member can make the following types of inquiry or request;
   a. Parliamentary inquiry,
   b. Point of information,
   c. Modification or withdrawal of a motion,
   d. Permission to read certain items to the Board with the permission of the Chair,
   e. Release from a duty,
   f. Approval for any other privilege.
2. A member may request that his views on individual items become part of the minutes, but such views must be presented to the secretary in writing. Requests and inquiries growing out of the business of the Board:
   a. Take precedence over any motion with whose purpose they are connected and can also be made at any time when no question is pending;
   b. Can be applied in reference to any motion or parlamentary situation out of which they arise;
   c. Are in order when another member has the floor if they require immediate attention;
   d. Do not require a second;
   e. Are not debatable;
   f. Are not amendable;
   g. Require no vote;
   h. Are not subject to reconsideration.

H. Voting

1. All voting shall be voice vote, except when the Chair requests that vote be taken by roll call or by a show of hands, or when a member wishing to be recorded as voting for the record so requests.
2. A roll call must be taken on each motion if requested by any one member of the Board.
3. The voting by roll call shall be done alphabetically, beginning with the first letter of the alphabet so as to show no partiality toward any member.
4. Any member may have his written explanation of a vote recorded in the minutes, and the student representative, a non-voting member, may have his opinion recorded in the minutes.

I. Rules Governing Discussion

1. Discussion shall be limited to the merits of the pending question.
2. The order of discussion shall be left solely to the discretion of the Chair.
3. Each member of the Board shall be allowed to speak no more than twice on the same motion, unless he requests permission of the Chair to be allowed to answer something of a personal nature or to correct a gross mistake. This shall in no way be interpreted to supersede the personal privilege prerogative of each member of the Board.
4. The Chair shall have the right to limit the length of discussion on each motion, if time is a critical factor.
5. Each member in discussing the issue before the Board should attempt to:
   a. Confine his remarks to the merits of the pending question;
   b. Refrain from attacking a member's motives;
   c. Address all remarks through the Chair;
   d. Avoid the use of members' names, if possible;
   e. Refrain from speaking adversely on a prior action not pending.
6. The Chair has, as an individual member of the Board, the same right to discussion as

any other member, but the impartiality required of the Chair in a discussion precludes his exercising these rights while presiding. Any remarks which the Chair wishes to make concerning an issue should be made after all other members have been recognized.

J. Minutes

The record of proceedings of the Board, usually called the minutes, shall contain mainly a record of what was done at the meeting. The minutes should never reflect the secretary's opinion, favorable or otherwise, on anything said or done. Members shall have the privilege of explaining their votes if they so request.

1. The body of the minutes should contain a separate paragraph for each subject matter and should show:
   a. The working with which each motion was adopted or otherwise disposed of (with the facts as to how the motion may have been discussed or amended before disposition, being mentioned only parenthetically);
   b. The disposition of the motion, including any temporary disposition, and primary or secondary amendment and adhering secondary motions that were pending;
   c. The names of the mover and seconder.
2. All points of order and appeals, whether sustained or lost, together with the reasons given by the Chair for the ruling should be included in the minutes.

K. Changing of Rules of Procedure

1. These rules may be changed by a majority vote of the entire Board, only after fifteen calendar days' notice to each member and in compliance with the Administrative Procedures Act of 1974, as amended.

Section 2.10. Colleges and Universities

A. Presidents' Council. A Presidents' Council shall be created and shall be composed of each of the presidents of the colleges governed by the Board. It shall enact its own bylaws and rules of procedure consistent with the policies of the Board. It shall elect its own chairman and secretary. The Presidents' Council shall meet upon call by its chairman or at the direction of the Board. The Presidents' Council shall bring matters to the attention of the Board and shall consider matters referred to it by the Board and make recommendations to the Board. The Presidents' Council shall make recommendations to the Board through the Secretary of the Board.

After a meeting of the Presidents' Council the minutes shall be sent to each member of the Board.

B. Faculty Advisory Council. A college and university faculty advisory council shall be created and shall consist of one faculty representative from each of the colleges and universities, this representative being the president of the faculty senate.

C. Student Advisory Council. A college and university student advisory council shall be created and shall consist of one student representative from each of the colleges and universities under the jurisdiction of the Board, this representative being the president of the Student Government Association.

Section 2.11. Professional Staff

A. Personnel and Duties

1. The Executive Director shall:
   a. Act as the chief administrative and executive officer of the state college and university system under its jurisdiction and shall serve as secretary to the Board, to the executive committee and to the standing and special committees.

      Subject to its control and supervision, he shall be responsible to the Board for the conduct of the affairs of the university system. He shall execute and enforce all of the decisions, orders, rules, and regulations of the Board with respect to the conduct of the university system.
   b. Receive as secretary of the Board all requests made by the Board of Regents for information and all other communications relative to the exercise of that Board's power and shall forward such to the president of the Board of Trustees.
   c. Perform such services assigned by the Board as may be necessary to accomplish the purposes for which the Board was established.
   d. Maintain the office for the Board and insure the efficient functioning of the Board's staff.
   e. Conduct continuing inquiry and studies into the problems of higher education.
   f. Survey and study carefully the organi-

zation, management, and all other affairs of each institution under the control of the Board, and report findings to the Board.

g. Recommend all changes that will increase efficiency and economy in the operation of each institution.

h. Compile and distribute to responsible officials copies of the laws, rules, and regulations for the governance of the state institutions of higher learning.

i. Employ with the approval of the Board, members of the Board's staff.

2. Finance Officer

a. The Finance Officer shall develop and maintain among the institutions a uniform system of accounts and financial reports, and shall supervise financial operations of the institutions as required by the Board, and shall assist the Executive Director in such other matters as may be required of him by the Board or said Executive Director.

b. The Finance Officer and/or the President of the Board shall be authorized to sign checks on all bank accounts established in the name of the Board.

3. Academic Programs Officer shall assist the Executive Director in performing his function, primarily as that function concerns the academic affairs of the colleges and universities of the system. He shall familiarize himself with the programs offered by these institutions and stand ready in his role as researcher to furnish information on such programs or make recommendations concerning program changes. He shall make himself particularly available to the Academic Affairs Committee and shall work closely with that committee and with the Executive Director in serving the academic needs of the institutions within the system.

4. Educational Specialist and Legislative Liaison Officer shall perform specialized research when directed by the Board. He shall draft legislation and resolutions to be introduced in the legislative session and keep the Board informed of all pending legislation. He shall act as liaison for the Board during interim meetings of joint committees and during the regular and extraordinary session of the Legislature. He shall represent the Board when placing new policies and procedures in the State Register as required by Louisiana's Administrative Procedures Act of 1974 as amended (R.S. 49:951-966).

5. Board Recorder and Records Supervisor shall record minutes of all meetings of the Board and of its committees. He shall file, index, and preserve carefully all minutes, papers, and documents pertaining to the business and proceedings of the Board and of its committees and shall be the custodian of all the records of the Board.

B. Bonding of Employees

Persons who sign checks shall be bonded, in compliance with State Law.

C. Retirement

The staff of the Board shall be eligible for membership in the teacher or state retirement systems.

D. Duties of Employees

1. The Executive Director and/or an appropriate member of the Board staff shall work closely with the various committees created by the Board.

2. The Board staff shall utilize the vast potential of the experienced competent professionals associated with the various institutions under the jurisdiction of the Board.

3. At the time the Board receives all budget requests, all current generally accepted budgeting procedures shall be researched by the staff and the findings and data brought to the attention of the Board.

4. The Board shall utilize the State Department of Education in order to coordinate and assist in its administrative duties and functions.

Section 2.12. Visitors at Board of Trustees Meetings.

All delegations or individuals wishing to appear before the Board shall submit their requests orally or in writing to the Executive Director, stating the matters they wish to discuss with the Board. The Executive Director shall make known to the President these requests; and the President shall then determine the time and manner in which the delegations or individuals shall be heard.

Part V

General Administrative Policies and Procedures

Section 5.1 Display of State Flag

The Board of Trustees directed its secretary to notify all institutions under its jurisdiction that Act 42 of the 1966 Session of the Louisiana Legislature requires that all public institutions must fly the flag of Louisiana along with the American flag.

Section 5.2 Policy and Procedure for Extreme Public Emergency

A. Extreme public emergencies involving jeopardy to life and property shall be certified to the Commissioner of Administration, in writing, in duplicate, signed by the president of the institution, stating the nature of the emergency, and giving amount of damage estimated, cost to replace or repair, availability of funds with the recommendation to the Board. After approval of the emergency as certified to the Commissioner, the Board may proceed to authorize that immediate steps be taken by the institution to prevent further loss or damage or to purchase such materials or equipment as may be needed under the circumstances, in accordance with applicable State laws.

B. For information and assistance in reporting and obtaining certification of emergencies, telephone 389-2233, Baton Rouge, or write the Executive Director of the Board of Trustees for State Colleges and Universities, P. O. Box 44307, Baton Rouge, Louisiana 70804. Wherever certification of extreme public emergency has been obtained by the Board, then within ten calendar days thereof the president of the institution shall publish a certification of the emergency in the official journal of the State proposing or declaring such public emergency. In any case, a fire loss or damage by the elements or other instances covered by insurance shall be reported immediately to the Insurance Section of the Division of Administration, P. O. Box 44095, Baton Rouge, Louisiana 70804, telephone 389-7075. The Insurance Manager will contact an insurance claims adjuster, and the two of them shall proceed immediately to ascertain the amount of the damage and to adjust the claim in the shortest possible time in accordance with existing procedures and State statutes. Wherever the emergency has been certified, the Board may direct an architect and the contractor approved by the Board and the insurance adjuster to obtain informal bids from subcontractors of all crafts and to furnish labor, equipment, and materials required for the final rehabilitation of the building. The Board may approve such bids and award contracts. However, if time permits, the Board may require that bids for any part of the work be advertised three times in ten days, provided that the advertisement is published in a daily newspaper in the locality. Maximum competition under the circumstances should be allowed, and every effort should be made to obtain three bona fide bids. In the event the Board wishes to buy all materials to be incorporated into the repairs to a public works built and completed, then, in that case, the Board may obtain bids from contractors only for labor necessary for the maintenance or rehabilitation of the building. In the event of emergency endangering state property or the health and welfare of persons whom the head of the agency is charged with the responsibility of protecting, then in that case immediate, affirmative action is authorized, without prior approval of the Commissioner. But, a request for certification of the emergency shall be made at the earliest possible moment thereafter. The above includes but is not limited to riots, hurricanes, or failures of a water well vital to fire protection.

Section 5.3 Use of Charter Airlines

The Board directs that only authorized CAB and FAA approved airlines be used for charter services by the institutions under the jurisdiction of the Board particularly in athletic programs.

Section 5.4 Colleges and Universities

A. Salesmen and Solicitors
The president of the institution of higher education under the jurisdiction of the Board of Trustees or his designated administrator may set their own procedures relative to salesmen, agents, solicitors, etc., operating on their respective campuses.

B. Sale of Alcoholic Beverages

1. Each college and university under the jurisdiction of the Board has the right to have local option insofar as serving beer on campuses is concerned. Those who can vote in this election must be qualified voters, emancipated under existing law, and registered students at the college or university. The Presidents' Council shall submit a uniform policy insofar as time, place and manner of operation.

2. Beer may be sold and/or consumed in the Student Union Building under controlled conditions to members of the college or

university community. Each college or university administration shall determine the time and place for the sale and/or consumption of beer.

General Conditions

1. Beer will be served by Food Service personnel only.
2. No unopened cans or other containers of beer shall be sold. Beverages sold must be consumed in the room or area in which served.
3. All local ordinances regarding the sale of beer shall be observed.
4. The college or university administration shall reserve the right to refuse to serve beer to any patron who apparently is behaving disorderly.
5. Any person who purchases or consumes beer shall be eighteen years of age. Proof of age shall be required at the time of purchase and may be required any time during consumption by authorized university or law enforcement officials.
6. Wherever beer is sold or consumed, soft drinks and other non-alcoholic beverages must be available.
7. A recognized student organization may request the sale of beer at a scheduled event.

Part X

Insurance, Accidents, Safety Policies and Procedures–General

Section 10.1 Emergencies

A. Fire Marshal Notification
Institutions under the jurisdiction of the Board shall notify the Fire Marshal's office immediately in the case of all explosions and fires.

B. Losses–Procedures
Partial losses or damages to buildings shall be attended to immediately by the institution authorities working in concert with the Board staff, the manager of the Insurance Section of the Division of Administration, and the adjustors for the insurance companies. Costs shall be submitted to the Board for final acceptance. In the case of total losses the same personnel mentioned above shall arrive at remedial measures, draw up a list of property destroyed, and submit them to the Board for review before advertising for bids.

C. Board Notification
The heads of all institutions under the jurisdiction of the Board shall notify the Board's Executive Director immediately by telephone and confirm by wire when damages occur and emergency measures must be taken so that the Executive Director can notify the President of the Board.

Section 10.2 Insurance

A. Buses, Vehicles
1. No head of any institution shall purchase any buses without the authorization of the Board, and those institutions with buses shall submit a definite statement with reference to coverage on those buses. The buses are not to be used until they are fully covered by liability insurance in accordance with State regulations.
2. All other vehicles at the institutions under the jurisdiction of the Board shall be insured in accordance with State regulations as to liability and property damage.

B. Group Hospitalization and Life
The Statewide Uniform Insurance program for hospitalization and life insurance coverage administered by the State Division of Administration shall be the only program for which State funds may be used to pay employer contributions. Institutions are authorized to allow employees to obtain additional coverage at their own expense, if desired; however, insurance salesmen or agents may solicit employees only with the prior permission of the institution president at such times and under such procedures as the president may establish.

Section 10.3 Safety Programs and Procedures

A. All colleges and universities have a moral and legal obligation to provide safety–that is, freedom from health hazards and risks of injury–for all employees, students, and the general public. Each college and university president

shall be responsible, either through safety committees representative of the campus community or any other method he deems advisable, for safety programs on his campus.

B. All new construction, additions, alterations, and renovations of campus buildings, including materials, fixtures, and equipment, shall conform to the State Fire Marshal Act (R.S. 40:1561 as amended) and all applicable local, regional, and national codes.

Bill Junkin
Executive Director

RULES

Board of Elementary and Secondary Education

The following rules were duly advertised for consideration and, after the appropriate waiting period, acted upon favorably by the Board in the meeting of November 20, 1975.

(1) Addition to the Policy and Procedure Manual of –

5.00.50.b Control of Federal Funds for Comprehensive Planning and Evaluation

In compliance with its policy making and budgetary authority, the State Board of Elementary and Secondary Education is designated the primary agency to receive, supervise and control Federal funds authorized and appropriated for the purpose of comprehensive statewide planning and evaluation, in particular those monies appropriated under Title V of the Elementary and Secondary Act of 1965.

(2) Addition to the Policy and Procedure Manual of –

3.01.70.u School Nurses

The certification requirements of school nurses, wherein applicants are required to "hold current license as a registered professional nurse," are amended so the words "in the State of Louisiana" shall be added to the phrase. Certification standards for school nurses are to become mandatory September 1, 1976.

(3) Addition to the Policy and Procedure Manual of –

3.01.70.v Amendments to Bulletin 746 Relative to Teacher Training and Approved Programs

3.01.70.v(1)

Paragraph 1, Page 9 of Bulletin 746 (white) shall read as follows:

The application shall include the following: (1) The signature of the dean of education, or the head of the unit that administers the approved teacher education curriculum, certifying that the applicant has graduated from or has completed an approved curriculum in teacher education and that the applicant is recommended for certification. An application for a secondary teacher's certification must also bear the signature of the dean or head of the unit offering each of the subject matter areas for which certification is recommended. (2) The signature of the registrar certifying that the applicant has earned the credit shown on the accompanying transcript and has attained a scholastic standing that is acceptable for graduation from the institution.

The transcript on which a certificate is based becomes the property of the State and must be kept in the files of the State Department of Education. No certificate for teaching in Louisiana may be issued to any person whose license has been revoked in any other state.

3.01.20.v(2)

Addition to the paragraph on page 2 of Bulletin 746:

An approved teacher education program is one that is submitted by an institution of higher education; that includes the general education requirements, the professional education requirements, and the subject matter discipline requirements; and that is approved by the State Board of Elementary and Secondary Education.

3.01.70.v(3)

The last sentence, first paragraph, page 1 of Bulletin 746 is changed to read:

Based on these factors, certification of teachers shall include the minimum requirements of Bulletin 746 administered through an approved teacher education program.

3.01.70.v(4)

An addition shall be made to the following as the first sentence of the first full paragraph, page 16, Bulletin 746:

Any student, while enrolled in any college or department, who wishes to become a certified secondary teacher may do so provided that the student (1) meets the criteria established for admission to the teacher education program and (2) completes the academic and professional requirements of that program.

3.01.70.v(5)

The first sentence, paragraph 3, page VI, Bulletin 746 shall read as follows:

Any person who did not teach as a regular teacher in Louisiana with a temporary certificate for at least three years prior to September 1, 1975, must complete an approved teacher education program.

3.01.70.v(6)

The last sentence, paragraph 1, page 8, Bulletin 746 shall read:

Applications for additional certification under these provisions must contain the recommendations as provided for under the section of this bulletin entitled "Application for Certification."

3.01.70.v(7)

Modifications to Bulletin 746 stated in 3.01.70.v(1-6) shall become effective in the fall of 1976, and shall be immediately applicable to students choosing and requesting a course of study based on the modifications.

3.01.70.w Statement of Principles Governing Teacher Certification and Training

Except insofar as university administration is concerned, which is the prerogative of private and State governing authorities, the following principles should govern the training of teachers:

I. The necessity for the certification of teachers is affirmed and all teachers should have the best possible preparation in content areas and in teaching skills and techniques.

II. The determination of the appropriate units for the administration of curricula and students is the responsibility of each university and its governing board.

It is recommended that each institution of higher education that is preparing secondary teachers implement the following policy:

Any regularly enrolled student, in any college or department of a university and who wishes to become a certified secondary teacher may do so provided the student meets the following conditions, (1) has met the criteria established for admission to the teacher education program and (2) has completed the academic and professional requirement, while enrolled in any college or department, as provided for in an approved teacher education curriculum that has been jointly developed by specialists from the appropriate academic departments and teacher educators of the institution.

III. There shall be joint advising of all secondary education students by the subject matter departments and the professional education area.

IV. A strong teacher education council should exist on each campus. Its function should be defined jointly by the Deans of Arts, Sciences, Humanities and Education, and other groups involved in teacher education.

V. We endorse continued emphasis on general education requirements for certification.

VI. Subject matter and pre-professional competencies of students in secondary education are essential for successful student teaching. Subject matter competence shall be endorsed by the head of the department of the student's major academic area of specialization and/or the dean or division chairman of the appropriate academic administrative unit. Pre-professional competence shall be endorsed by the head of the department of education or the head of the

unit which administers the approved teacher education curriculum or the dean of education.

The recommendation for certification of the student as a secondary teacher shall be made subsequent to student teaching by the dean of education or of the head of the unit which administers the approved teacher education curriculum. Verification of subject matter competence(s) in the teaching area(s) shall be attached to all secondary teacher certification applications by the dean or head of the unit which contains the area(s) of specialization.

VII. A State teacher certification committee should be established. The committee should include broad representation from the Council of Deans of Colleges of Arts, Sciences and Humanities and Deans of Colleges of Education and subject matter specialists from institutions of higher education, in addition to representation of other professional and lay groups. When established, all proposals for changes in teacher certification requirements to the State Board of Elementary and Secondary Education should be referred to this committee by the State Board of Elementary and Secondary Education for advice and recommendation prior to consideration for action by the State Board of Elementary and Secondary Education.

VIII. The certification requirements for science teachers should be changed. In the absence of a definitive proposal, the following will illustrate the direction which is desired:

Science: The science requirement in each area shall include the hours required in general education.

(1) Biological science–a minimum of twenty semester hours in biological science to include courses in

(2) Chemistry–a minimum of twenty semester hours in chemistry to include courses in

(3) Earth sciences–a minimum of twenty semester hours in earth science to include courses in

(4) Physics–a minimum of twenty semester hours in physics to include courses in

(5) General science–a minimum of twenty-four semester hours to include six semester hours in biological sciences, six semester hours in biological sciences, six semester hours in chemistry, six semester hours in earth sciences, and six semester hours in physics. Included in the general science requirements shall be a minimum of one semester hour or the equivalent of laboratory in each of the required science.

(4) Addition to the Policy and Procedure Manual of –

6.02.10 Provisional Designation as Competent Authority–Individuals with Master's Degrees in Psychology

Provisional designation as competent authority may be granted to individuals with master's degrees in psychology, contingent upon a letter of supervision from a licensed psychologist and the stipulation that such provisional designation not carry the title "psychologist." (see also 3.01.70.t, Louisiana Register, September 20, 1975, p. 399)

(5) Addition to the Policy and Procedure Manual of –

3.00.12 Vocational-Technical Programs–General Policies

Vocational-technical education shall be administered as an intergral part of the school system. Offerings shall be coordinated in the vocational-technical system with post-secondary and high school vocational programs in a systematic design to avoid unnecessary duplication of educational services, extra costs and capriciously instituted programs.

The objectives for the Louisiana vocational-technical education system shall be determined through a valid survey of various state populations in order to arrive at a set of objectives that are consistent with the wishes of the citizens of the state. The present focus, until the survey is completed, is to prepare youths and adults with the necessary knowledge and skills for job competency and self-actualization. While educational programs are not designed to train for credit transfer

purposes, all schools are expected to maintain educational standards which assure students the opportunity to acquire credit for their demonstrated knowledge and skills after proper testing and evaluation.

Offerings will be planned and evaluated through an educationally valid system of curricular analysis, economic and social shifts and needs, and documented public demands. No policy shall be pursued which shall restrict training opportunities solely because there is no conclusive evidence that immediate job opportunities are available if there is valid evidence that openings will exist in that specific area.

Every effort shall be made to expand an educational program in a school when there is a continuing waiting list of applicants seeking such educational training if it is based on valid study conclusions which indicate economic and social growth and application feasibility.

With the view of serving all the vocational education needs of the people, the Board believes that any special state or federal appropriations for vocational education should be made in the name of vocational education, and that plans and allocations of state and federal funds should be approved by the Board and administered by the State Superintendent of Education.

RESOLVED: That the State Board of Elementary and Secondary Education and the State Department of Education have explored certain areas of relationship between them and have reached the following conclusions:

(1) That there are probably no irreconcilable differences between the two authorities.
(2) That the Board hereby reiterates its statement of policy concerning the place of vocational education in the total educational program as follows:

(a) Vocational Education
Vocational education is an integral part of the entire public school educational offering in the state, the parishes and the cities. As such, it should remain under the control of the Board and the parish and city school boards. Supervision shall be conducted by the State Board of Elementary and Secondary Education through its administrative arm, the State Department of Education. Vocational programs in general should be provided for youths and adults regardless of whether or not they are in attendance in the regular public schools. Courses should be organized and offered whenever and wherever the needs arise, provided the needs are consistent with the state system of needs analysis and are congruent with economic and social growth directions.

(b) The purpose for vocational-technical education in the State of Louisiana is to serve the economic and social needs of all the citizens of the state, to upgrade the skills and educational base of the Louisiana worker and to actualize the unfulfilled potential of all Louisiana citizens in order to produce an economically and socially progressive state and a better standard of living of all Louisianans.

3.00.13 Financial Support of Vocational Education Programs

To assure fair and equitable budgeting and allocations of funds for vocational education, the Board shall be guided by the annual State Plan for the Administration of Vocational Education. This plan constitutes the general policies for program priorities and financial support. Allocations shall be made on an annual basis, except when specifically authorized by the Board and so designated in approving such allocation.

Earl Ingram
Director

RULES

Commission on Fire Fighting Personnel Standards and Education
Approved Thirty-hour Instructor Training Course for Fire Instructor I

Requirements for becoming a Commission certified

fire instructor at Level I after the initial start-up period are:

1. Must have five years or more fire fighting experience in a fire department.

2. Must have successfully completed a Commission approved thirty-hour instructor training course.

   Note: The curriculum listed below is that approved by this Commission for this Instructor I course. In addition to the curriculum, the institute, etc. conducting the course must also be approved. Already approved for this purpose are the L.S.U. Firemen Training Center and Delgado Institute.

Purpose: The overall goal of the course is to develop basic skills and competencies in the following areas:

1. Principles of learning
2. Motivation of students
3. Instructional analysis
4. Organization of instructional content
5. Lesson planning
6. Methods of teaching
7. Instructional aids
8. Evaluation of instruction

Objectives: Upon completion of the course, the student should be able to:

1. State the recognized principles of learning, explain how they affect learning, and incorporate them into a lesson.
2. Explain why motivation is important, and discuss various ways of motivating students.
3. Prepare a job description for a job, occupation, or activity common to his field.
4. When given a job description, make an analysis of the job, occupation, or activity in order to determine instructional content.
5. When given the results of an instructional analysis, arrange the content into an instructional order based upon acceptable criteria and develop an instructional outline of a course, unit, or series of lessons.
6. Prepare lesson plans for both information and demonstrate type lessons.
7. Teach a demonstration lesson of ten to fifteen minutes in length.
8. Teach an information lesson of ten to fifteen minutes in length.
9. Select, develop, and use instructional aids in teaching information and demonstration type lessons.
10. Explain the purpose of evaluation, how it relates to the objectives, and select and develop evaluation devices.

Outline of Content:

I. Orientation

   a. Teaching as a professional
   b. Requirements for effective teaching

II. Principles of learning

   a. Recognized principles
   b. Importance
   c. How they affect teaching

III. Motivation

   a. Importance of motivation to learning
   b. Method of motivating students

IV. Preparation for teaching

   a. The job description

V. Instructional aids

   a. Importance
   b. Characteristics of
   c. Common types
      1. Charts and posters
      2. Slides
      3. Overhead projector
      4. Models
      5. Chalkboard
      6. Instruction sheets

VI. Methods of teaching

   a. The demonstration lesson
   b. The information lesson

VII. Evaluation of instruction

   a. Purpose of evaluation
   b. Role of objectives in evaluation
   c. Methods of evaluation

VIII. Workshop critique

Approved Performance Evaluations for Fire Fighting II Certification

1-1 Scope. These requirements identify the professional level of competence required of fire department members in order to become certified at their second level of progression within the fire department, i.e., Fire Fighter II.

1-2 Purpose. The purpose of these requirements is to specify, in terms of performance objectives, the minimum requirements of professional competence required for service as a Fire Fighter II.

It is not the intent to restrict any jurisdiction from exceeding these minimum requirements.

1-3 General.

1-3.1 All of the performance requirements for any level of fire fighter shall meet the following criteria: It shall be performed swiftly, safely and with competence. Each objective shall be met in its entirety.

1-3.2 It is not required for the objectives to be mastered in the order they appear. It is required, however, that any courses conducted to prepare a fire fighter to meet the performance objectives must be taught by, or under the supervision of, a Commission certified instructor for that level.

1-3.3 Performance of objectives for qualifications at Fire Fighter II level may be approved by at least two Commission certified instructors working together.

1-3.4 A fire fighter must have satisfactorily completed performance objectives required of a certified Fire Fighter I before he can challenge the requirements of Fire Fighter II. This does not prevent a fire fighter from performing objectives for both Fire Fighter I and Fire Fighter II simultaneously. As a matter of development, however, it is assumed there will be a time of active fire service between the I and II levels which will allow prior training to mellow and become more meaningful through actual use.

1-4 Definitions.

1-4.1 Fire Fighter: The member of a fire department who has fulfilled the entrance requirements of the department but has not met the objectives for Fire Fighter I.

1-4.2 Fire Fighter I: The fire fighter, at the first level of progression in the fire department, who has demonstrated the knowledge of and the ability to perform the objectives specified for that level, and who works under direct supervision.

1-4.3 Fire Fighter II: The fire fighter, at the second level of progression in the fire department, who has demonstrated the knowledge of, and the ability to perform the objectives specified for that level, and who works under minimum direct supervision.

1-4.4 Fire Fighter III: The fire fighter, at the third level of progression in the fire department, who has demonstrated the knowledge of, and the ability to perform the objectives specified for that level, and who works under minimum supervision, but under orders.

1-4.5 Fire Department: The agency that provides fire rescue, fire suppression and fire prevention services to a state, parish, municipality, organized fire district, or federal institute or military facility.

1-4.6 Safely: To perform the objective without injury to self or others.

1-4.7 With competence: Possessing knowledge, skills, and judgment needed to perform indicated objective satisfactorily.

1-4.8 Swiftly: The time, as provided herein, that it takes an approved fire fighter to perform the objective satisfactorily.

1-4.9 Demonstrate: To show by actual use, illustration, simulation, or explanation.

1-4.10 Identify: To physically select, indicate, or explain verbally or in writing, using standard terms recognized by the fire service.

1-4.11 Objective: Observable or measurable demonstration of a skill, knowledge, or both.

1-4.12 Qualification: Having satisfactorily completed the requirements of the objectives.

1-4.13 Commission: The Louisiana Commission on Fire Fighting Personnel Standards and Education.

1-4.14 Certified: Having met all Commission requirements for the level of progression for which the fire fighter is applying.

Fire Fighter II Performance Objectives

3-1 General.

3-1.1 The fire fighter shall demonstrate shutting off the gas services to a building.

3-1.2 The fire fighter shall demonstrate shutting off electrical service to a building.

*3-1.3 The fire fighter shall demonstrate the procedures for determining the point of origin and cause of a fire.

*3-1.4 The fire fighter shall demonstrate proper reporting of findings at the fire scene.

*3-1.5 The fire fighter shall demonstrate protecting and preserving evidence in fires of a suspicious nature.

3-2 Forcible Entry.

3-2.1 The fire fighter shall identify materials and construction features of doors, windows, roofs, floors, and vertical barriers found in the area of the authority having jurisdiction; and shall also identify dangers associated with each in an emergency situation.

Note: The intent of the objective, relating to the dangers associated with the emergency situation, is for the fire fighters to recognize the indicators that a building is ready to collapse.

3-2.2 The fire fighter shall demonstrate the method and procedure of forcible entry through any door, window, ceiling, roof, floor, or vertical barrier specified by the authority having jurisdiction.

*3-2.3 The fire fighter shall demonstrate knowledge of any precautions to be taken in the application of each tool used.

3-3 Protective Breathing Apparatus.

3-3.1 The fire fighter shall demonstrate the correct procedure for daily inspection and maintenance of the breathing apparatus used by the authority having jurisdiction.

*3-3.2 The fire fighter, given each type of breathing apparatus used by the authority having jurisdiction, shall demonstrate the correct procedure for recharging and reassembling for use.

3-3.3 The fire fighter shall demonstrate the correct use of emergency procedures including breathing apparatus to assist other fire fighters, conservation of air and restrictive use of by-pass valves.

Note: The intent of this objective is to assure that the fire fighter understands the buddy breathing system and is familiar with the manner of assisting another fire fighter who may, due to equipment breakdown or other emergencies, be without air.

3-3.4 The fire fighter shall demonstrate the operational functions and principles of operation of all types of protective breathing appartus used by the authority having jurisdiction.

3-4 First Aid.

3-4.1 The fire fighter shall identify four sources from which information might be gathered pertaining to the nature of an accident victim's injuries.

3-4.2 The fire fighter, given specified situations, shall identify what injuries might be suggested from observation of the injury-producing mechanisms, in addition to those injuries that are obvious.

3-4.3 The fire fighter, given a victim, shall conduct a secondary survey for other than life-threatening injuries.

Note: The intent of this objective is for the fire fighter to examine the victim in order to determine injuries that may not be obvious on the primary search. An example would be fluid from the ears, depressions of the skull or spasm, or tenderness in the abdomen.

3-4.4 The fire fighter shall identify the symptoms of internal bleeding.

3-4.5 The fire fighter shall demonstrate caring for a person with known or suspected internal bleeding.

3-4.6 The fire fighter shall list the classes of thermal burns according to severity, and shall also explain the physical characteristics of each class.

3-4.7 The fire fighter, given a specified situation, shall demonstrate the emergency care procedure indicated, and shall explain the significance of each step.

3-4.8 The fire fighter shall identify the emergency care for chemical burns, including chemical burns of the eyes.

3-4.9 The fire fighter shall identify the types of fractures and describe the differences.

3-4.10 The fire fighter shall identify three general symptoms of fractures.

3-4.11 The fire fighter, given an identified fracture, shall demonstrate the emergency care necessary to transport the victim.

3-4.12 The fire fighter shall demonstrate and explain the anatomical process of breathing.

3-4.13 The fire fighter shall demonstrate the heart-lung-brain relationship as it affects life and shall explain what occurs when an airway obstruction is not corrected.

3-4.14 The fire fighter shall demonstrate cardio-pulmonary resuscitation employing the two-person technique.

3-4.15 The fire fighter shall identify symptoms of traumatic shock.

3-4.16 The fire fighter shall demonstrate how to treat traumatic shock.

*Note: Satisfactory completion of the American Advanced Red Cross First Aid Course or equivalent will be accepted as compliance with first aid requirements.

3-5 Ropes.

3-5.1 The fire fighter, when given a simulated fire fighting or rescue task, shall select the appropriate size, strength, and length rope for the task.

3-5.2 The fire fighter shall select and tie a rope between two objects at least 15 feet apart, using an approved hitch or knot, that will support the weight of a fire fighter on the rope.

3-5.3 The fire fighter shall demonstrate the use of rope, using approved knots and hitches, to tie ladders, hose and other equipment, so as to secure them to immovable objects.

*3-5.4 The fire fighter shall demonstrate lowering himself with a rope from a height of at least two stories using a rappelling method as approved by authority having jurisdiction.

*3-5.5 The fire fighter shall demonstrate proper storage of a rope so that it can quickly be put into service as specified by authority having jurisdiction.

*3-5.6 The fire fighter shall demonstrate tying any other knots required of authority having jurisdiction and not covered elsewhere in performance evaluations.

3-6 Salvage.

3-6.1 The fire fighter, given salvage equipment, and operating as an individual and as a member of a team, shall demonstrate the construction and use of a water chute.

3-6.2 The fire fighter, given salvage equipment, and operating as an individual and as a member of a team, shall demonstrate the construction and use of a water catchall.

3-6.3 The fire fighter, given salvage equipment, but excluding salvage covers, shall demonstrate the removal of debris, and removal and routing of water from a structure.

3-6.4 The fire fighter, given the necessary equipment, shall demonstrate the covering or closing of openings made during fire fighting operations.

*3-6.5 The fire fighter shall demonstrate knowledge of other actions not already evaluated which can affect salvage.

3-7 Fire Hose, Nozzles and Appliances.

3-7.1 The fire fighter, given an approved fire department pumper, shall identify, select, and demonstrate the use of any nozzle carried on that pumper.

3-7.2 The fire fighter, given the necessary equipment, shall demonstrate all hand hose lays specified by the authority having jurisdiction.

3-7.3 The fire fighter shall demonstrate inspection and maintenance of fire hose, couplings and nozzles, and recommend replacement or repair as needed.

3-7.4 The fire fighter shall demonstrate all hydrant/pumper connections as required by the authority having jurisdiction.

*3-7.5 The fire fighter shall demonstrate knowledge of the correct use of all hose appliances and adapters in the possession of and as required by the authority having jurisdiction.

3-7.6 The fire fighter shall demonstrate conducting an annual service test for fire hose.

Note: NFPA Standard 198 is recommended.

3-8 Fire Streams.

3-8.1 The fire fighter, given fire situations, for each situation shall:

(a) Identify the phase of burning
(b) Select the proper nozzle and hose size

3-8.2 The fire fighter shall identify characteristics of given types of fire streams.

3-8.3 The fire fighter, given five fire ground

situations, shall select and identify the proper adaptors or appliances.

3-8.4 The fire fighter shall identify several precautions to be followed while advancing hose lines to a fire.

Note: There should be at least eight different situations that the fire fighter should avoid while advancing hose lines to a fire. Such hazards could include: fences, sharp objects that damage the hose, anything that might bind or catch or cramp the hose while the lines are being advanced.

3-8.5 The fire fighter shall identify three conditions that result in pressure losses in a hose line.

3-8.6 The fire fighter shall identify four special stream nozzles and demonstrate at least two uses or applications for each.

3-8.7 The fire fighter shall identify and explain foam making appliances used, and shall produce a foam stream from all types of foam making appliances used by the authority having jurisdiction.

3-8.8 The fire fighter shall identify three observable results that are obtained when the proper application of a fire stream is accomplished.

3-8.9 The fire fighter, given the necessary resources, shall identify, select, and assemble those items required to develop at least three types of fire streams.

3-9 Ladders.

3-9.1 The fire fighter shall identify the materials used in ladder construction.

3-9.2 The fire fighter shall identify the load safety features of all ground and aerial ladders used by the authority having jurisdiction.

3-9.3 The fire fighter shall demonstrate inspection, care and maintenance procedures for all different types of ground and aerial ladders used by the authority having jurisdiction.

*3-9.4 The fire fighter shall demonstrate special uses and raises of a ground ladder such as for stretchers, bridging, church or dome raise, etc.

3-9.5 The fire fighter shall demonstrate a nationally accepted service test for ground ladders.

Note: The NFPA Standard 193 is recommended.

3-10 Ventilation.

3-10.1 The fire fighter shall demonstrate the use of all different types of power saws and jack hammers used by the authority having jurisdiction.

3-10.2 The fire fighter shall identify the different types of roofs, demonstrate the methods used to ventilate each type, and identify the necessary precautions.

3-10.3 The fire fighter shall demonstrate how to determine the size of an opening for ventilation, how to locate these openings, and identify and explain the precautions to be taken during ventilation.

3-10.4 The fire fighter shall demonstrate the removal of skylights, scuttle covers and other covers on roof tops.

3-10.5 The fire fighter shall demonstrate all different types of equipment for forced ventilation used by the authority having jurisdiction.

3-10.6 The fire fighter shall demonstrate ventilation using water fog.

*3-10.7 The fire fighter shall demonstrate knowledge of the correct use of attack lines in connection with ventilation.

3-11 Inspection.

3-11.1 The fire fighter shall prepare diagrams or sketches to record the locations of items of concern during pre-fire planning operations.

3-11.2 The fire fighter shall collect and record, in writing, information required for the purpose of preparing a report on a building inspection or survey.

3-11.3 The fire fighter shall demonstrate school exit drill procedures as specified by the authority having jurisdiction.

3-11.4 The fire fighter shall demonstrate life safety programs for the home.

Note: The intent of this objective is for the fire fighter to explain "OPERATION EDITH" (Exit Drills In The Home), giving its goals and objectives, and describe the type of participation that is carried on in the local area.

3-11.5 The fire fighter shall identify common fire hazards and make recommendations for their correction.

*3-11.6 The fire fighter must identify three of the leading causes of fires in residences.

3-12 Rescue.

3-12.1 The fire fighter shall demonstrate the procedure to remove debris, rubble, and other materials found at a cave-in.

3-12.2 The fire fighter shall demonstrate the use of the following rescue tools:

(a) Shoring blocks
(b) Trench jacks
(c) Block and tackle
(d) Hydraulic jacks
(e) Screw jacks

3-12.3 The fire fighter shall demonstrate how to prepare a victim for emergency transportation by using standard available equipment, or by improvising a method.

3-12.4 The fire fighter shall identify some dangers of search and rescue missions in tunnels, caves, construction sites, and other hazardous areas as specified by the authority having jurisdiction.

3-12.5 The fire fighter, given equipment used by the authority having jurisdiction and operating as a member of a team, shall demonstrate the extrication of a victim from a vehicle accident.

3-12.6 The fire fighter, given the proper rope, shall tie the proper knot on a person, and lower that person from a third floor level.

3-12.7 The fire fighter shall demonstrate the use of breathing aid equipment used by the authority having jurisdiction, and explain the precautions of care and maintenance of each unit.

Note: Breathing aid equipment includes equipment such as resuscitators, inhalators, bag masks, aspirators, and airways.

*3-12.8 The fire fighter shall demonstrate knowledge of basic procedures for bomb threat searches.

3-13 Water Supplies.

3-13.1 The fire fighter shall demonstrate knowledge of the water distribution system, and other water supplies in the local community.

Note: The intent of the objective is for fire fighters to be able to use a map showing the distribution of the water supply throughout the city. They should know the primary source of water, the amount of water storage that creates pressure to the system, and be familiar with the minimum standards of sizes of water mains the jurisdiction's codes might require.

3-13.2 The fire fighter shall identify the following parts of a water distribution system:

(a) Distributors
(b) Primary feeders
(c) Secondary feeders

3-13.3 The fire fighter shall identify the following types of fire hydrants:

(a) Dry-barrel fire hydrant
(b) Wet-barrel fire hydrant

3-13.4 The fire fighter shall identify the following:

(a) "Normal operating pressure" of a water distribution system
(b) "Residual pressure" of a water distribution system
(c) The "flow pressure" from an opening that is flowing water

3-13.5 The fire fighter shall identify the following types of water main valves:

(a) Indicating
(b) Non-indicating
(c) Post Indicator
(d) Outside Sewer and Yoke (O S & Y)

Note: In many publications, this term is referred to as the Open Stem and Yoke

3-13.6 The fire fighter shall determine fire hydrant usability by inspecting for:

(a) Obstructions to use of hydrant
(b) Direction of hydrant outlets to suitability of use
(c) Mechanical above-ground damage
(d) Condition of paint or rust and corrosion
(e) The full flow by fully opening and closing the hydrant
(f) Ability to drain

*3-13.7 The fire fighter shall demonstrate knowledge of the meaning of any color code system used on hydrants according to authority having jurisdiction.

3-14 Sprinklers.

3-14.1 The fire fighter shall identify the "main drain" valve on an automatic sprinkler system.

3-14.2 The fire fighter shall open and close a "main drain" valve on an automatic sprinkler system.

3-14.3 The fire fighter shall identify the "main control" valve on an automatic sprinkler system.

3-14.4 The fire fighter shall operate a "main control" valve on an automatic sprinkler system from "open" to "closed" and then back to "open".

3-14.5 The fire fighter shall demonstrate knowledge of the value of automatic sprinklers in providing safety to life of occupants in a structure.

3-14.6 The fire fighter shall identify and explain the dangers of premature closure of sprinkler "main control" valve, and of using fire hydrants to supply fire hose streams when the same water system is supplying the automatic sprinkler system.

3-14-7 The fire fighter shall identify the difference between an automatic sprinkler system that affords complete coverage and a partial sprinkler system.

3-14.8 The fire fighter shall identify at least three sources of water for supply to an automatic sprinkler system.

3-14.9 The fire fighter shall identify the following:

(a) Wet sprinkler system
(b) Dry sprinkler system
(c) Deluge sprinkler system

3-14.10 The fire fighter, when given the tools and sprinklers head, shall properly remove one head from the system and replace it with a head of the same type.

Note: Some local jurisdictions may require that a licensed plumber be present when any work of this nature is being done. This is only recommended as a training exercise and not to indicate that the fire fighter should be responsible for maintenance of any private company or corporation's system.

3-15 Fire Alarm and Communications.

3-15.1 The fire fighter shall identify and demonstrate knowledge of areas assigned for first alarm response.

3-15.2 The fire fighter shall demonstrate proper use as specified by the authority having jurisdiction, of radio equipment, both mobile and portable.

3-15.3 The fire fighter shall demonstrate arrival and situation reports over fire department radios in the manner specified by the authority having jurisdiction.

3-15.4 The fire fighter shall demonstrate any supervisory alarm equipment provided in the fire station and the prescribed action to be taken upon receipt of designated signals.

3-15.5 The fire fighter shall identify and explain fire location indicators provided to direct fire fighters to specific locations in protected public or private properties.

3-16 Portable Extinguishers.

3-16.1 The fire fighter shall identify the portable extinguisher rating system.

*3-16.2 The fire fighter shall identify the greatest distance each type fire extinguisher can be effectively used to extinguish a fire.

***3-17 Overhaul.**

*3-17.1 The fire fighter shall identify the purpose of overhaul, when it is conducted and demonstrate the fire department procedure for overhaul of a building and its contents.

*3-17.2 The fire fighter shall demonstrate knowledge as to the value of proper overhaul in fire fighting operations.

*3-17.3 The fire fighter shall demonstrate knowledge as to what fire scene information will be derived and other benefits from proper overhaul.

***3-18 Fire Pumper Familiarization and Operating Priniciples.**

*3-18.1 The fire fighter shall identify total amount, size, and type of hose carried on fire pumper, according to authority having jurisdiction.

*3-18.2 When given the name of any tool or equipment carried on a standard pumper, the fire fighter shall go directly to the compartment or storage location and remove that item from the pumper.

*3-18.3 The fire fighter shall correctly engage and disengage the fire pump while being supervised.

*3-18.4 The fire fighter shall demonstrate a basic knowledge of the pumper, operating panel by correctly identifying the: throttle, intake gauge, discharge gauge, change over or transfer valve, R.P.M. gauge and intake and discharge valve.

*3-18.5 The fire fighter, under supervision, shall demonstrate that he could move the apparatus to safety during an emergency by driving and backing the apparatus a short distance as specified by authority having jurisdiction.

***3-19 Special Small Tools and Equipment.**

*3-19.1 The fire fighter shall identify and demonstrate, under supervision, the use of any special tools and equipment frequently used but not a part of standard fire pumper equipment.

*—In addition to, or alternation of NFPA 1001.

Approved Subjects for Certified Fire Fighter II Training*
(Number of Hours Shown are Suggested)

General Subjects	Classroom	Practical Work or Demonstration
Determining point of origin and cause of fire a. Preservation of scene and evidence b. Proper reporting of findings	4	4
Forcible entry a. Building construction features affecting forcible entry b. Methods and procedures c. Forcible entry equipment	2	2
Protective breathing apparatus a. Types and operating procedures b. Conservation of air and use of valves c. Safety precautions d. Recharging and routine inspections and maintenance	1	1
First aid (current multi-media card plus 4 hours cardiopulmonary resuscitation)	12	
Fire service ropes and knots a. Rope selection and limitations b. rescue knots, hitches, etc.	2	4
Fire hose, nozzles and appliances a. Hose loads and lays b. Hydrant and pumper connections c. Handling techniques and precautions d. Service test on hose	1	2

Approved Subjects for Certified Fire Fighter II Training*
(Number of Hours Shown are Suggested)

General Subjects	Classroom	Practical Work or Demonstration
Fire streams a. Phases of burning b. Proper nozzle and application c. Nozzles, appliances and adaptors and their uses. d. Precautions e. Basic hydraulics	8	8
Ladders a. Construction; load limits; features b. Uses and raises c. Inspection, care and maintenance d. Tests	2	4
Ventilation a. Reasons, principles, methods and precautions b. Use of power equipment c. Determining size and location of openings d. Special techniques and means	4	8
Fire prevention and inspections a. Common fire hazards and their correction b. Emergency exit plans and procedures; schools and residential and others c. Sketches and diagrams for pre-fire planning d. Basic pre-fire planning e. Writing inspection and survey reports	6	10
Rescue a. Building collapses and earth cave-ins, etc. b. Search procedures and precautions c. Vehicle accidents d. Ropes and knots in rescue e. Breathing aid equipment f. Preparing and transporting an injured victim g. Basic bomb threat procedures	6	8
Water supplies a. Distribution system b. Type hydrants and valves c. Type pressures d. Using hydrants	2	2
Sprinkler a. Type systems and water supplies b. Identifying control valves and heads	2	2

Approved Subjects for Certified Fire Fighter II Training*
(Number of Hours Shown are Suggested)

General Subjects	Classroom	Practical Work or Demonstration
Fire alarm and communications a. Alarm response area and how signaled b. Use of communication equipment	2	1
Portable fire extinguishers a. Review chemistry of fire and fire behavior b. Rating system and types of extinguishers c. Extinguishing agents	1	1
Overhaul	1	2
Salvage	1	2
Fire pumper familiarization and operating principles a. Equipment carried and its purpose b. Amount and size of hose and type of load c. Basic operating principle panel d. Engaging pump and limited driving	4	6
Special small tools and equipment a. Equipment frequently used but not necessarily a part of fire pumper inventory such as hydraulic equipment, power saws, smoke ejectors, etc.	2	2
Public relations	1	
Review, evaluation and completion exercises	10	4
TOTAL	74	71

NOTE: Except for those accepted under the "grandfather" provision, all others applying to become certified as Fire Fighter II must first be certified as a Fire Fighter I.

Subjects taught in Fire Fighter I level should be reviewed as an introduction to information being presented in Fire Fighter II courses.

Jimmy Chapman
Executive Director

RULES

Louisiana Health and Human Resources Administration

(Editor's Note: The following rules were adopted on November 14, 1975, to be effective on December 20, 1975. Appendixes A, B, C, and D, sample forms entitled Application for License, Nutritional Guideline–Recommended Pattern for Meals, and Assessment Tool have been deleted as per R.S. 49:954, 1C.)

Minimum Standards for License of Adult Day Care Centers

Introduction

The Louisiana Health and Human Resources Administration is authorized by Act 701 of the Regular Session, 1975 to develop and publish standards for licensing adult day care centers and to license those centers as may apply for licensure.

Reasonable compliance with these standards shall be required for those adult day care centers which receive funds for their program through the LHHRA. Centers that apply for license must also meet the requirements of other departments such as Health, fire, and zoning regulations where applicable.

The purpose of the adult day care program is to provide personal care, supervision, and group experience in a protective setting so as to offer an alternative to or a possible prevention of institutionalization of physically, mentally, or socially impaired adults.

An adult day care center is defined as "any place operated by a person, society, agency, corporation, institution, or any other group wherein are received five or more persons aged seventeen years of age or older who are not related to such person and who are physically, mentally, or socially impaired, for daytime personal care and supervision." The term "daytime" means any portion of a twenty-four hour day.

Application for a license is made on a form provided for that purpose by the LHHRA, Division of Family Services. Upon determining that the center is in compliance with the minimum standards, LHHRA shall issue a license to the center which shall be valid for a period of one year. A license may be revoked or suspended at any time after due notice is given if the practice of the center falls below the minimum standards. There is no charge for the licensing service.

If an application for license is received from a center which does not meet the minimum standards, but is attempting in good faith to meet the standards, LHHRA may issue a temporary license to the center. The center shall meet the following conditions prior to the issuance of a temporary license:

1. Approval by Fire and Health Departments.
2. Sufficient equipment and supplies for the number of participants to be served.
3. Public liability insurance.
4. Meet zoning regulations.
5. Have medical information on staff.
6. Other requirements under the law:
    a. Occupational license.
    b. Registration with Department of Employment Security.
    c. Registration with Internal Revenue Service.

All requirements for licensing shall be met within six months. A temporary license is required prior to the center receiving funds from LHHRA.

Should LHHRA refuse to grant a license or revoke a license, any individual or organization operating such center has the right to mandamus LHHRA as provided by Act 701, Regular Session, 1975.

A license shall not be transferable to another person or to another location. If there is a change in location or ownership, the license shall be returned to the Director of the Division of Family Services and an application submitted for a license.

According to Act 701, it shall be the duty of LHHRA through its authorized agents to inspect at regular intervals without previous notice centers licensed by the agency.

Included as an appendix to the standards are recommended forms and information which are intended to provide helpful guidelines and suggestions to center administrators in program development.

Application for a license is submitted to the Division of Family Services, Louisiana State Health and Human Resources Administration, Post Office Box 44065, Baton Rouge, Louisiana 70804. This means that the applicant is requesting that the center be studied for a temporary license. As soon as possible, the licensing worker will visit the center and make the study. At the same time, the applicant must request inspections by the Fire and Health Departments.

The study will be referred to the center administrator for review in order to eliminate any inaccuracies. The study then is submitted to the Director, Division of Family Services, for review and decision. When it is determined that the center meets requirements, a license is issued. If and when it is determined that the center does not have the potential to meet minimum requirements and provide a satisfactory program, the agency will recommend that the license be refused.

Re-Licensing Procedure

Ordinarily licenses are issued for a period of one year. Before expiration of licenses the center administrator is expected to ask for re-inspections by the Fire and Health Departments at least two months before the expiration date and ascertain that all information is current. The re-licensing study is similar to the original licensing study but may not be as detailed. Again the center administrator has an opportunity to review the study before it is submitted to the Director. If the study reveals that the center is not meeting minimum requirements, the office will recommend that a new license not be issued.

Appeal Procedure

If the license is refused, suspended, or revoked because a center is not suitable, is not properly managed as such, or does not meet minimum requirements for license, the procedure is as follows:

1. The Director, Division of Family Services, by registered letter, shall advise the center administrator of the reasons for refusal, suspension, or revocation, and its right of appeal.

2. Within fifteen days after receipt of such notice, the center administrator may request in writing a hearing in order to appeal the decision.

3. The Director shall set a hearing to be held within fifteen days after receipt of such request. The hearing shall be held in the immediate vicinity of the appellant.

4. The Director, or his representative, shall conduct the hearing. Within ten days after the hearing, the Director shall advise the appellant, by registered letter, of his decision, either confirming or reversing the original decision. If the license is refused, suspended or revoked, the center shall be given thirty days to meet those standards delineated by the licensing agent.

5. If the center is unable to meet the standards within this time frame, funding received by the center from LHHRA shall be discontinued and written notice of the violation shall be given to the district attorney for the parish in which said violation(s) occurs.

I. Organization and Administrative Plan

A. Non-Profit Organizations

1. Application

A written application shall be filed with the Division of Family Services in the name of the governing body which will be held responsible by the State in carrying out the operations of the center.

2. Governing Body

a. There shall be a responsible governing body which shall be one of the following:

(1) a board of local citizens elected or appointed for that purpose; or

(2) a board or committee comprised of members from a religious or charitable organization such as church, lodge, veterans' organization, et cetera; or

(3) a public authority.

b. The governing body shall exercise sufficient authority so that it can be held reasonably responsible for the center's practices.

c. The governing body shall have the power to appoint and to dismiss the director of the center and the authority to confirm the statement

of purpose and any supplementary or amended statements.

d. The governing body shall clearly define the duties and responsibilities of the director and determine who has authority to employ and dismiss personnel.

e. The governing body shall maintain records regarding qualifications and references of the director.

f. The governing body shall establish written policies concerning center operations including personnel policies.

3. Resources

a. Centers must have sufficient financial resources to insure adequate care to the participants for whom responsibility is assumed, and shall furnish upon request proof of liability insurance.

b. Centers must have at the time of opening adequate equipment for the number of participants for whom care is assumed and continue to maintain an adequate supply.

c. The responsibility of raising funds should not interfere with the director's administrative duties in conducting the program.

d. Participants shall not be involved without their informed consent in campaigns or publicity efforts.

4. Change in Program

The Division of Family Services shall be notified before changes are made in the programs or composition of the governing body in order to determine the effect upon the license.

5. Required Records

a. Reports shall be submitted annually to the Division of Family Services showing the number of participants admitted and discharged during each month of the year.

b. Personnel records

There shall be on file at the center for each member of the staff a record listing:

(1) Name, age, address, telephone number
(2) Health records
(3) Previous training, including education
(4) Previous experience
(5) Accidents at center
(6) Any professional license
(7) In-service training

c. Participant records

There shall be on file at the center for each participant a record listing:

(1) Identifying and social data
(2) Medical data
(3) Accidents or illnesses at center
(4) Functional assessment
(5) Attendance
(6) Activities
(7) Referrals

d. Current reports from the Fire and Health Departments

e. Certificate of liability insurance

f. Retention of records

It is advised that all records concerning past or present medical conditions of participants are confidential except for specific exclusions contained in the Medical Records Act (R.S. 44.7). The expressed written consent of the participant must be obtained prior to the disclosure of medical information regarding the participant.

Also medical records must be retained for a period of six years following date of participant's withdrawal from program.

B. Proprietary Centers

1. Application

A written application shall be filed with the Division of Family Services in the name of the person who will be held responsible by the State in carrying out the operations of the center.

2. Accountability

   a. The owner or governing body shall be held responsible for the center's practices.

   b. Written policies shall be established concerning center operations including personnel policies.

3. Resources

   a. Centers must have sufficient financial resources to insure adequate care to the participants for whom responsibility is assumed and shall furnish proof of liability insurance.

   b. Center must have at the time of opening adequate equipment for the number of participants for whom care is assumed and continue to maintain an adequate supply.

   c. Participants shall not be involved without their informed consent in campaigns or publicity efforts.

4. Change in Program

   The Division of Family Services shall be notified before changes are made in the program or ownership in order to determine the effect upon the license.

5. Required Records (Refer to Section A-5 under Non-Profit Organizations)

II. Personnel

A. Staffing Pattern

1. Staff to participant ratio must be a minimum of one full time staff member to every ten participants or fraction thereof; e.g., a center with 1-10 participants shall have at least one full time staff member; 11-20 participants requires two full time staff members; 21-30 participants requires three full time staff members.

2. Only those staff members directly involved in participant care and supervision shall be considered in assessing staff/participant ratio.

3. There shall be a substitute present when a regular staff member is absent.

B. Staff Qualifications

1. General: Personal qualities desired in center staff include a basic respect for people and their abilities, particularly the aged, blind and disabled; knowledge and understanding of the special characteristics of this group; and a willingness to work with participants toward maximizing their capacity for self-sufficiency and self-fulfillment. Each staff member shall be competent and reliable to assume assigned duties.

2. Required Position: Each center shall employ as a director a staff person who has at least two years responsible experience in human services. A degree in Human Services such as social work, nursing, education, or psychology may be substituted for the two years responsible experience. In order to insure adequate health care, it is strongly recommended that at least one staff person be a graduate or a licensed practical nurse.

3. Other staff positions will be determined by size and type of program. Where possible, personnel with skills in planning program activities, counseling, occupational therapy, physical therapy, and dietetics should be employed or retained as consultants.

4. Support staff such as clerical, janitorial, and kitchen shall be employed as needed to effect program operations and shall meet the same health requirements as other staff members.

5. Volunteers shall be considered as a supplement to the regular staff component serving in those capacities commensurate with their qualifications. Volunteers may serve as a source for special skills related to programming or can offer individual attention to participants in such areas as grooming and personal care. Volunteers shall be supervised and shall function within the policies and procedures of the program.

6. There shall be in the center at all times a staff member who has knowledge of and can apply first aid.

C. Health Requirements

1. At the time of employment and annually thereafter, each staff member shall obtain examinations that include tests and/or x-rays to verify the absence of active communicable diseases.

2. Staff members with symptoms of any communicable disease or illness shall not be present in the center.

3. Ongoing supervision of proper sanitary and hygiene practices of staff members shall be the responsibility of the center administrator.

D. Practices

1. At the time of employment, each staff member shall be informed of his duties through a written job description which shall also designate the person to whom he is administratively responsible.

2. The center director shall assume responsibility for adequate orientation and training of personnel which will enable further development of their skills.

III. Admission Practices

A. Application Process

Before a participant is admitted to a center, a designated staff person shall obtain the following information:

1. Social Data

(a) Participant's name, date of birth, home address, and home telephone number.

(b) Name, address, and telephone number of participant's closest relative or friend.

(c) Brief social data to include participant's marital status, existence of supportive family members or friends, general health status, need and eligibility for existing community services, education, former occupation, and leisure-time interests.

(d) The name, address, and telephone number of participant's physician or medical facility; date of participant's last physical exam.

2. Medical Data

A written statement, signed by a physician and summarizing participant's general health status shall be received prior to participant's admission into program. Statement shall be based on an examination made within one month prior to admission and should note special dietary needs, prescribed medications, allergies, and any limitations on activity.

3. Functional Assessment Sample Form

(a) Degree to which participant is ambulant.

(b) Visual or hearing limitations or other physical impairments.

(c) Apparent mental state (degree of confusion or alertness).

(d) Ability to control bowel and bladder.

(e) Ability to feed self.

(f) Ability to dress self.

B. Assessment Process

A participant shall be admitted on the basis of the adequacy of the center's facility and ability of its personnel to meet the participant's needs within the established program format.

IV. Care of Participants

A. Nutrition:

1. The program shall include a morning snack and may include an afternoon snack, particularly if there is more than a four-hour period between meal and admittance or dismissal.

2. There shall be a hot, well-balanced meal which provides 1/3 R.D.A. (Recommended Dietary Allowances) of the National Research Council.

The Division of Health, Nutrition Section, will give consultation services to centers with regard to meal planning and preparation. This service may be requested by contacting the local health unit. Also, the home economics agent in the parish extension office is available for consultation services on nutrition.

3. Clients with simple, restricted diets shall be accommodated.

4. Menus shall be varied and shall be planned well in advance and posted; any substitutions shall be of comparable nutritional value.

5. All food and drink shall be of safe quality.

6. Drinking water shall be readily available to participants.

B. Health Service to Participant

Health services which will be provided participants shall be specified and appropriate personnel shall be available for delivery of those services. Where health services for participants cannot be provided as needed within center operations, staff shall provide referral services to medical facilities, as appropriate, and shall follow up to assure that participant is receiving needed services. Emergency medical arrangements to include an on-call physician and ambulance service shall be designated. A written agreement with the emergency treatment unit of a nearby hospital is recommended to facilitate a quick response to a participant's health needs.

C. Service Provision

1. Participant Plan of Care and Activities

Shortly after admission, appropriate personnel shall work with participant to determine health and personal care needs which can be met at the center and to develop a plan of group and independent activities with him/her based on his/her interests, needs and abilities.

2. Personal Care Provisions

A nurse shall supervise the provision of such personal care services as cutting nails and oral hygiene. Instructions shall be given to participants by center staff to enhance their capacity for self-care in regard to dressing and grooming, self-feeding, housekeeping, and home safety.

3. Counseling and Casework

Where casework services, legal services, and/or counseling for participants and families cannot be provided as needed within center operations, staff shall provide referral services to social agencies and community mental health centers as appropriate, and shall follow-up to assure that participant is receiving needed services.

4. Reality Orientation

Where participants exhibit some disorientation and confusion, the adoption by the center of the reality orientation approach as developed by the Veterans Hospital, Tuscaloosa, Alabama, is recommended. Group sessions should be held in which participants are helped by repetition to remember their names, where they are, what they had for breakfast, what activity they just participated in. Staff should reinforce this approach by reminding participants of the next activity, other participant's names, and other concrete pieces of information on an individual basis.

D. Daily Program

1. There shall be a planned daily program of both individual and group activities which is sufficiently varied and structured so as to directly involve the participants in a stimulating and meaningful use of time while at the center. Emphasis shall be given to building on participant's former skills and developing new ones.

2. Participants shall be encouraged to take part in the planning and directing of activities. Programming shall allow for active and passive participation.

3. A daily exercise period shall be planned and carried out for those who are capable of participating. Use of or consultation with a physical therapist is highly recommended.

4. Program activities shall include nutrition education and counseling.

5. When available community resources should be tapped to provide educational programs, lectures, concerts, and similarly stimulating activities to participants.

6. The use of arts and crafts activities shall make use of the rehabilitational as well as the recreational values of such pastimes; a supply of program materials adequate to accommodate all participants shall be on hand.

7. A daily rest period shall be incorporated into the program.

8. Outdoor activities such as gardening, walking shall be provided where space, weather, and participant's health permit.

9. A friendly, supportive, comfortable, and safe atmosphere shall be maintained at all times, and all participants shall be treated equitably with respect, kindness, and patience.

V. Facility and Equipment

A. Space Requirements

1. The center shall provide a minimum of twenty-five square feet of indoor space for each adult present at the center. This space shall:

   a. Be measured wall-to-wall using inside dimensions of rooms used by clients.

   b. Be exclusive of kitchen, bathrooms, office, halls, stairways, and storage areas.

2. If provided, outdoor space shall:

   a. Be well drained.

   b. Be free from sharp objects, poisonous plants, highly flammable materials, open wells, drainage ditches, sewage disposal equipment, dangerous machinery, garbage receptacles and garbage, and other hazards.

   c. Have level walkways.

B. General Requirements

1. Building shall comply with all local municipal fire, health, safety, and zoning codes.

2. All programs, activities, and meals must be on ground level unless building has an elevator.

3. Entrance to facility should be on ground level, or if steps or stairs, a sturdy banister and ramp shall be installed.

4. Areas shall be well lighted, heated, and ventilated.

5. Telephone service shall be available with a list of numbers posted nearby in a prominent place indicating fire, police, medical, and other appropriate emergency contacts.

6. Emergency disaster exit plan shall be developed and posted in a prominent location.

7. Proper methods for eradication and control of all insects and rodents shall be exercised.

C. Physical Facility and Furnishings

1. Kitchen: The area must meet local health and sanitation requirements and must be large enough to accommodate meal preparation for proposed number of people.

2. Dining Area: Furnishings must include tables and comfortable chairs sufficient in number. Meals may be served cafeteria fashion or directly at table if physical condition of participants so warrant. The use of self-help equipment for self-feeding should be encouraged when indicated.

3. Lounge and Recreational Area(s): Adequate lounge type furniture for all participants shall be furnished and shall be appropriate for use by the elderly in terms of comfort and safety. Furniture that either seats too low or tips easily is to be avoided. Clean and comfortable cots or beds shall be available for lying down or napping of participants, if needed.

4. Toilet Facilities: There shall be toilet facilities sufficient in number to accommodate participants. Handrails shall be installed to meet the needs of disabled participants.

5. There shall be a separate room or partitioned area for temporarily isolating a participant in case of illness.

6. There shall be a well-equipped first aid kit on hand, and at least one staff member shall be on duty at all times who is trained in its use.

7. Closets or chests where medicines, poisons, or other potentially dangerous materials are kept shall be securely locked.

8. Adequate tables and chairs shall be furnished for use in crafts and other program activities.

9. Sufficient equipment and materials to support both independent and group activities shall be provided.

10. All furnishings and equipment shall be kept clean and in good repair.

11. Floors and steps shall have a non-slippery surface and be dry when in use by the participants. Doorways and passageways shall be kept clear to allow free and unhindered passage.

VI. Transportation

The center which provides transportation of participants to and from their homes assumes additional responsibility for the safety of participants, and must have ample commercial liability insurance coverage.

It is recommended that transportation of participants to and from the center be limited to a maximum of thirty minutes each way in order to avoid fatigue.

A. Transportation Furnished by Center

1. Must conform to State laws pertaining to regulations, drivers, vehicles, and commercially rated insurance.

2. The driver shall meet personal and health qualifications of other staff.

3. The driver shall hold a chauffeur's license.

4. If transportation is furnished, the number of occupants allowed in a car, bus, station wagon, or any other types of transportation shall not exceed the number for which the vehicle is designed.

5. Provisions shall be made to accommodate participants who use assistive devices for ambulation.

6. The vehicle shall be maintained in good repair.

B. Transportation by Commercial Concern

When the center contracts with a commercial concern for transportation, it shall select one with good reputation and reliable drivers. Above rules shall be observed.

William H. Stewart, M.D.
Commissioner

12-20-75

RULES

Louisiana Health and Human Resources Administration

(Editor's Note: Exhibits B, D, E, G, H, I, J, and K are samples of forms, logs, and certificates. They are not reproduced here, as per R.S. 49:954.1C)

Rules and Regulations for Chemical Test for Intoxication

The Louisiana Health and Human Resources Administration, Division of Health, having published notice of its intention to adopt certain rules and regulations pertaining to breath and blood alcohol analysis methods and techniques pursuant to R.S. 32:663, hereby adopts the following rules and regulations pertaining to the performance of chemical tests for intoxication.

1. The Division of Health, Louisiana Health and Human Resources Administration, is the successor to, and acts as, the State Department of Health and/or Department of Health, R.S. 46:1751 et seq.

2. Before any breath testing device can be used for chemical analysis in breath alcohol testing to determine the amount of alcohol in a person's blood, a prototype of the make and model of such a device must be approved by the Louisiana Health and Human Resources Administration, Division of Health, Bureau of Laboratories.

After the Louisiana Health and Human Resources Administration, Division of Health, Bureau of Labo-

ratories, has approved a prototype breath testing device as an acceptable model for chemical analysis in breath alcohol testing it shall be necessary for each individual instrument of the approved model to be checked out, and approved for use, by the State Police Crime Laboratory and a certification numbered tag should be attached to the machine and a log maintained for each machine in the State Police Crime Laboratory.

3. Analysis of breath specimens for the determination of the alcohol content therein will be performed with the Photo-Electric Intoximeter Model No. 400 single cylinder instrument manufactured by Intoximeters, Inc., St. Louis, Missouri, which has the approval of the Louisiana Health and Human Resources Administration, Division of Health, Bureau of Laboratories. The Photo-Electric . . . Model No. 400 single cylinder, is an approved technique or method for the performance of chemical tests for alcoholic influence.

4. The procedure for such analysis shall include the following:

   A. Observation of the subject for a period of twenty minutes prior to testing whereby the subject shall not have ingested alcohol, alcoholic beverages, regurgitated or vomited.

   B. The operator conducting breath analysis shall conduct such analysis in accordance with the "photo-electric intoximeter check list" which contains but is not limited to the following (See Exhibit A):

      1. Completing the information section concerning such things as name of subject, time, witness, arresting and testing agency, instrument number and location and State Police Crime Laboratory machine certification tag number.

      2. A calibration check whereby the calibration of the instrument is checked by using a set of standard ampuls which accompany each instrument. A standard ampul of known value is used whereby the reading must be within the given range to show the calibrating section of the instrument is working properly.

      3. Preparation of the instrument whereby temperature is checked and the ampul to be used in such analysis is checked to show it is within a certain tolerance plus or minus .010g%. This is to insure a good ampul will be used in the analysis.

      4. A systems blank by which the instrument is shown to be free of contamination. Limitations here will be from +.010g% thru -.020g% whereby corrections from here will be made to produce the final reading.

      5. Sample collection whereby the sample is taken and the 20 minute observation period is checked off.

      6. Alcohol determination section whereby the instrument is flushed, scale zero checked and final reading taken. The ampul will be discarded after analysis since preservation will yield erroneous results after the ampul is opened, used in analysis, and exposed to continuous light. This ampul also contains acid which is very corrosive and may cause injury or damage if not properly disposed of.

   C. After each test the results will be recorded in the intoximeter log book (See Exhibit B). A copy of which is to be sent to the State Police Crime Laboratory at the end of each month and a copy to be retained at the testing agency.

   D. A chemical test for intoxication of either blood or breath shall be administered after the arrest but within two hours of the violation, but the person arrested, having refused the test in writing properly acknowledged by two witnesses, or orally in the presence of two witnesses, shall not be administered the test, having once refused.

5. Any manufacturer of any apparatus, device or equipment made for the purpose of analyzing the alcoholic content of breath, may request the Division of Health, Bureau of Laboratories, to approve such apparatus, device or equipment. The Bureau will consider said request upon submission of such information, instructions for use, exemplars, and other pertinent data as the Board may request.

6. Maintenance checks will be performed on a routine basis at least once every four months. Items to be checked shall be but not limited to the following:

   A. Each lot of ampuls shall be spotchecked and certified by the manufacturer as to their quality. This certificate shall be prima facie evidence as to the standard of the ampul.

B. Clean instrument

C. Calibration check of standard ampuls

D. Running of a known alcohol solution in which results shall be within plus or minus .010g% or the known alcohol value. (See Exhibit C)

E. In the event any repair work is needed, it will be recorded in detail (See Exhibits D & E)

Repair work will be performed by technicians working for the Applied Technology Section of the Louisiana State Police Crime Laboratory who are certified by the Louisiana Health and Human Resources Administration, Division of Health, Bureau of Laboratories, to perform such maintenance. The Applied Technology Section of Louisiana Police Crime Laboratory shall have the authority to instruct other individuals to perform such maintenance (Exhibit F). Upon satisfactory completion of such training the individual shall be certified to perform maintenance by the Louisiana Health and Human Resources Administration, Division of Health, Bureau of Laboratories.

Records covering maintenance, etc., of the P.E.I. (photo-electric intoximeter) instrument will be kept by the Louisiana State Police Crime Laboratory.

7. Qualification for the certifications of individuals to conduct breath test analysis are as follows:

A. Employee of a Louisiana law enforcement agency or Federal law enforcement agency.

B. At least 18 years of age.

C. Resident of the State of Louisiana at time of application.

D. Graduation from a State-accredited high school or satisfactory passing of the "general educational development test" or equivalent educational background.

E. Successful completion of a forty-hour operator's training course conducted by the State Police Crime Laboratory, or any other course approved by the State Police Crime Laboratory. Course material to be covered will be taken from "Chemical Test for Intoxication Training Manual" (See Exhibits H & G).

F. To successfully complete the training course and become certified, the operator must:

1. Obtain a seventy-five percent score on the written examinations covering course material.

2. Obtain a seventy-five percent score on the actual operation of the P.E.I. and practical test (running of unknown solutions). Written test and practical test will be made up by instructors of the Louisiana State Police Crime Laboratory.

3. All testing results will be recorded on the "chemical test for intoxication progress record" (See Exhibit I). One copy to be retained by the Crime Laboratory and one copy to be forwarded to the Division of Health.

G. Qualifications for certification of instructors will be as follows:

1. Certified as a P.E.I. operator or certified on any other approved instrument.

2. Attendance of an additional forty-hour course approved by the Division of Health.

3. Involved in a chemical testing program approved by the Louisiana State Police Crime Laboratory.

8. Upon determining the qualifications of individuals to perform such analysis and after submitting an application for certification (Exhibit J), the Division of Health may issue permits which shall be effective for a period of two years from the date inscribed thereon and the Bureau of Laboratories, State Division of Health, shall keep a record of all permits and ready reference to the expiration of all certificates issued.

A. Permits (See Exhibit K) may be renewed after an eight-hour refresher course, given by the Louisiana State Police Crime Laboratory or any other designated agency.

B. In addition to being certified on the P.E.I., an operator may also attend a specified course for certification on any new instrument that is approved by the Division of Health.

9. All persons seeking to be authorized to conduct blood analysis shall:

A. Make application to the Division of Health for permit.

B. Have a bachelor of science in chemistry, physics, biology, zoology, medical technology, or a related field.

C. Conduct proficiency testing set up by individual laboratories.

D. Be employed in either a crime laboratory, medical laboratory or analytical laboratory, and have at their access necessary instruments and equipment for analysis of blood for alcoholic content.

10. The methods approved for blood-alcohol analysis of blood are:

A. Gas Chromatography

1. Headspace sampling with internal standard (See Exhibit L).

2. Direct Injection with Internal Control (See Exhibit M).

B. Distillation Method (See Exhibit N).

C. Permits shall be effective when issued for a period of five years from the date inscribed thereon. Permits may be renewed by making application to the Division of Health.

11. Blood drawn for the purpose of determining the alcoholic content therein shall have been taken with the contents of the "B–D Blood Alcohol Kit" No. 4900 or No. 4991 for post-mortem determination (manufactured by Becton-Dickinson Division of Becton, Dickinson and Company, Rutherford, New Jersey), or by a similar blood collection kit approved by Louisiana Health and Human Resources Administration, Division of Health, Bureau of Laboratories. "B–D Blood Alcohol Kits" or similar blood collection kits as approved will be made available to all law enforcement agencies by the Louisiana State Police Crime Laboratory.

William H. Stewart, M.D.
Commissioner

* * * *

EXHIBIT A

SUBJECT TESTED _____ DRIVER'S LICENSE NO. _____

DATE OF BIRTH _____ RACE _____ SEX _____

OPERATOR _____ DATE _____

WITNESS _____ TIME _____

ARRESTING AGENCY _____ TESTING AGENCY _____

MACHINE LOCATION _____ MACHINE NO. _____

First Section: Calibration Check

1. Both power switches on ☐. Galvanometer mechanically zeroed ☐.
2. Standard ampul of 0.000 g% value removed from case, wiped clean, shaken and placed in well. Scale set at zero. Button depressed and needle brought to center by means of Knob K4. ☐
3. Standard ampul of _____ g%value removed from case, wiped clean, shaken and placed in well. Standard ampul read: _____ g%.

Second Section: Preparation of Instrument

4. Temperature in green area (105-110° F or 40.5-43.3° C).☐
5. Sampling assembly mounted on vent and valve to Position I. ☐
6. With scale set at 0.000 g% and reference ampul in well, button was depressed and needle brought to center by means of Knob K4. ☐
7. Stock ampul gauged ☐, opened, wiped clean and placed in well.
8. Stock ampul read: _____ g% (zero correction; note plus or minus).
9. New and clean bubbler tube attached and new and clean mouth piece attached. ☐

Third Section: Systems Blank

10. Valve to Position IV ☐; rod down. ☐
11. Ampul read (bubbler partly withdrawn): _____ g% (Final correction). (Note plus or minus).

Fourth Section: Sample Collection

12. Shifted sampling assembly to take sample, bubbler tube reinserted, valve to Position III. ☐
13. Subject under observation twenty minutes and nothing taken by mouth. ☐
14. Breath sample was obtained according to operating instructions and the accepted sample met the following requirements: A deflated waste bag was used ☐. Sequence: waste bag filled ☐; indicator rod rose steadily ☐; rod fully up when valve was turned to Position IV ☐. (record time).

Fifth Section: Alcohol Determination

15. Rod down. ☐ Bubbler tube removed and discarded. ☐
16. At this point the instrument was flushed by turning valve to Position I to fill the cylinder ☐; then to Position II to discharge cylinder through sampling assembly ☐; then back to Position I to fill cylinder ☐; then to Position IV to flush delivery tube. ☐
17. First reading of ampul: _____ g%.
18. Scale zero checked with reference ampul (same as Item 6). ☐ If it has changed, reset with Knob K4. Re-read the test ampul three to five minutes after Item 15. Second reading of ampul _____ g%.
19. Power switches off and sampling assembly stored. ☐ Ampul discarded. ☐

Results:

Second reading of ampul (Item 18) _____ g%
Final correction (Item 11): _____ g%
Blood alcohol concentration: _____ g%

* * * *

Exhibit C
Photo-Electric Intoximeter Maintenance Check List

Date_____ Instrument No._____ Technician _____

City_____ Time of Arrival _____

Agency: L.S.P. Troop_____ Sheriff's Department_____ City Police_____

Check List

Is machine kept covered? Yes_____ No
Was machine sealed? Yes_____ No
Are ampuls kept covered? Yes_____ No

1. A.C. Power Source_____ OK
2. Condition of Power and Lamp Switch_____ OK
3. Condition of P.E.I. dirty etc._____ OK. If not what _____
4. Warm-up time approximately fifteen minutes_____ OK
5. Thermometer_____ OK
6. Colorimeter_____ OK
7. Lens and light bulb wiped clean_____ OK
8. Sampling Assembly_____ OK
9. Mechanical zero and galvanometer _____ OK
10. Galvanometer_____ OK

11. Standard Ampuls_____OK. Check for tolerance_____OK
12. Alcohol simulator test -- run known standard_____
    Known reading_____. Instrument read_____
    Tolerance ± .010 g%, if adjustment necessary
    Describe_____
13. Valve_____OK 105 cc cylinder_____OK
14. Interior of instrument checked for plumbing connection, wiring, acid spills, etc._____OK

Supply issue: list all supplies left at agency; if adequate indicate with check.

Operator check list_____
Alcoholic influence form_____
Rights form_____
Refusal form_____
Intoximeter log book_____
Use this space for any additional notes:

Ampuls_____
Waste bags_____
C.E.B. bulbs_____
Plastic cover_____
Tees or tubing_____

_____
Signature of Technician

* * * *

Exhibit F

Qualification of Persons Conducting Repair Work on the Photo-Electric Intoximeter

Persons who perform repair work on the Photo-Electric Intoximeter shall have spent no less than eighty hours covering, but not limited to, the following:

1. Proper cleaning of the 105 cc cylinder and piston.
2. Proper cleaning of the multi-port valve.
3. Proper care, cleaning, and painting of the cabinet.
4. Checking the calibration and trim of the scale.
5. Detecting switch trouble and replacing button.
6. Replacing of power and lamp switches.
7. Temperature regulation.
8. Heater replacement.
9. Air pump and plumbing replacement.
10. Repair and replacement of fan motors.
11. Remaking of standard ampuls.
12. Proper cleaning, painting and repairing of the colorimeter.
13. Checking of the photocells.
14. Detecting any malfunction of galvanometer and mechanical zero.
15. Wiring and circuit connections.
16. Neutralization of any acid spills.

* * * *

Exhibit L

Quantitative Gas Chromatographic Determination of Blood Ethanol by Headspace Sampling With Internal Standard

Instrumentation:

1. Chromatograph: A Hewlett-Packard 700 gas chromatograph, or similar instrument, is operated as a single flame instrument. The flame detector is operated at a temperature of approximately 250° C. Cylinders of hydrogen and compressed air are used. The hydrogen flow is set at a rotometer reading of 3 at 18 psi and air adjusted to give optimum response with stability. Cylinder nitrogen is used as carrier gas, set at a rotometer reading of 3.5 at 50 psi. The column, a 4' x ¼" stainless steel tube, is maintained at approximately 180° C. The column is packed with 8 g of Porapak Q originally conditioned at 200° C overnight. The injection port is maintained at a temperature of approximately 170° C. The electrometer is normally set at a range of 1, attenuation X 20.

2. Integrator. The electrometer signal is connected directly to a Hewlett-Packard 3370A Digital Integrator set at the following parameters:

Up Slope Sensitivity	0.01 mV/min
Down Slope Sensitivity	0.01 mV/min

Baseline Reset Delan	infinity
Peak Summation Level	1,000 mV
Front Shoulder Control	OFF
Rear Shoulder Control	1,000 mV
Recorder Presentation	1 mV

Noise suppression is adjusted according to need for the particular batch of samples being analyzed.

3. Recorder: The duplicated signal from the integrator is connected to a Tracor, Westronics model MT, 12 inch, 1 millivolt recorder, used at a speed of ½ inch per minute.

4. Calculations: A Wang 700A/701 Programmable Calculator with output writer is used for analysis of the data generated by the integrator. The program is written so that calibration data for known blood alcohol concentrations are fitted (by the method of least squares) to the line

$$CONC = a_1 \frac{R\,(EtOH)}{R\,(INT\,STD)} + a_0$$

The correlation coefficient is also calculated:

$$r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2]\,[n\Sigma y^2 - (\Sigma y)^2]}}$$

and the Standard Error of Estimate:

$$S_{y \cdot x} = \frac{1}{n}\sqrt{n\Sigma y^2 - (\Sigma y)^2 - \frac{(n\Sigma xy - \Sigma x \Sigma y)^2}{n\Sigma x - (\Sigma x)^2}}$$

Individual (x,y) data points are retained and plitted digitally. The regressed concentrations and estimated standard deviations for each are also calculated and tabulated for comparison with data. Estimated Standard Deviations are calculated by the formula:

$$S_y = S_{y \cdot x}\sqrt{1 + 1/n + x^2/\Sigma x^2}$$

The format of the calibration printout is given as figure 1.

The slope and intercept of the calibration line are retained in calculator memory and used for solving unknown blood alcohols by solving into the regression equation. A printout of each such calculation is generated for records. Samples may be calculated at any desired level of replication. (Normally, duplicates of each unknown blood are determined.) For the purpose of reporting, the lowest value obtained is truncated at the second decimal place. The format of this printout is shown in figure 2.

5. Glassware: Class A glassware is used throughout. Pure alcohol is measured from a burette. Solutions are measured by transfer pipet. Blood is measured by Ostwald-Folin pipet.

Procedure:

1. Alcohol Stock Solution: Alcohol standards are prepared in terms of grams per 100 cubic centimeters in accordance with Louisiana law. Absolute ethanol from a freshly opened bottle is used. For the purpose of preparing calibration solutions, the alcohol is considered 99% pure. This figure was derived from studies of specific gravity of the alcohol after opening the bottle. Overestimation of the purity of the alcohol results in overestimation of the unknowns. An alcohol solution of 50 g/l is prepared by measuring

$$\frac{50}{0.79 \times 0.99} = 63.9 \text{ ml}$$

into a 1000 ml volumetric flask. The volume is made to the mark with water, allowed to equilibrate at room temperature, and made again to the mark if necessary. This 5 g% solution is then dispensed into 20 ml glass ampuls and rapidly sealed by fusion. The entire liter quantity is thus preserved for use as needed. A random sample may be taken for oxidative analysis as described below.

2. Blood Standards: Citrated whole blood obtained when out of date for transfusion is used. One milliliter of the stock alcohol solution diluted to 100 c.c. with blood will provide a blood of 0.05 g% concentration. Multiples of this volume are used to prepare a calibration curve with values of 0.05, 0.10, 0.15, 0.20 and .25 g%.

3. Working Standards and Unknowns: Serum bottles of 30 c.c. capacity with rubber septum stoppers are used to contain the working standards. These are prepared by adding 3 ml of a sodium chloride solution approximately 25 g%. The solution is evaporated overnight in an oven, leaving a residue of 3/4 g NaCl. Exactly equal volumes of internal standard and blood are delivered into the dry bottles, which are immediately stoppered. (Ordinarily, 1.00 ml is the volume used.) *The internal standard is prepared by diluting 2 ml of 1-propanol to a liter with water.* The exact concentration of this solution is not important, but must be constant for

the calibration curve and the batch of unknowns calculated from it. The 0.2 vol% concentration was chosen to give a peak height roughly equal to that given by the average alcohol determined (0.18 g%). The combined blood and internal standard are mixed by rotating the bottle on its side, care being taken not to allow any blood to contaminate the stopper. A hypodermic needle is used to bleed the headspace to atmospheric pressure, and the samples are allowed at least 20 minutes to come to equilibrium. If working standards are prepared in this manner and kept refrigerated while not in use, they may be kept for several weeks, removing as much as 10 ml of headspace daily without significant change in the ratio of ethanol/propanol in the samples. In practice, the working standards are not kept longer than one week.

4. Sampling: The sample is taken with an ordinary 3.0 c.c. disposable plastic syringe fitted with a 1.5 inch, 22 gauge needle. The syringe is filled to the 1.5 c.c. mark with air which is injected into the bottle being sampled. The plunger is then pumped vigorously 5 or more times and a 1.5 c.c. sample withdrawn. The volume is adjusted to 1 ml and injected swiftly and smoothly into the injection port of the chromatograph. The integrator is started immediately. Five 1 c.c. rinses with room air have been found sufficient to completely remove all traces of ethanol from the syringe.

* * * *

Calibration Data:

	R (EtOH)	R (INT STD)	RATIO	CONC
1	3011.00	16190.00	.1859	.050
2	4326.00	12210.00	.3542	.100
3	5534.00	9851.00	.5617	.150
4	8935.00	11990.00	.7452	.200
5				

Plot:

.050 .
.100 .
.150 .
.200 .

CONC = .2648 X Ratio + .002

r = .99927
Std Error of EST = .00212

Y Calc:

	RATIO	CONC	STD DEV
1	.185	.051	.00240
2	.354	.096	.00248
3	.561	.151	.00264
4	.745	.200	.00283

CONC = .2648 X Ratio + .002

r = .99927
Std Error of EST = .00212

R (EtOH)	R (INT STD)	RATIO	CONC	STD DEV
Blood of: John Doe				
8123.00	16350.00	.4968	.1342	.00259
6325.00	12620.00	.5011	.1354	.00259
RESULT: .13				
Blood of: Boyd Conners				
9615.00	15300.00	.6284	.1691	.00271
10150.00	16450.00	.6170	.1661	.00270
RESULT: .16				
Blood of: Jane Doe				
1546.00	12210.00	.1266	.0362	.00238
2651.00	14180.00	.1869	.0522	.00240
RESULT: .03				

* * * *

Exhibit M

Quantitative Gas Chromatographic Determination of Blood Ethanol By Direct Injection With Internal Control

Instrumentation:

(Note: All operating parameters should be adjusted for optimum performance as judged by response and linearity of calibration curve.)

1. Chromatograph: A Hewlett-Packard 7610 gas chromatograph or similar instrument is operated as a single column instrument. The flame detector is operated at a temperature of approximately 300°C. Cylinders of hydrogen and compressed air are used. The hydrogen flow rate is set at about 25 cc per minute, air flow rate is set to about 500 cc per minute. The column, ¼" X 4' glass tube, is maintained at about 170°C. The column is packed

with Porapak Q, 80/100 mesh. (Glass wool packing is placed at both entrance and exit of the glass column. Observation of the glass wool after 20-30 injections of blood will indicate the need for changing. Performance of the column will indicate need for changing the Porapak Q.) The helium carrier flow rate is adjusted to give a retention time for ethanol of not less than one minute. The injection port is maintained at approximately 140°C. (The temperature is intentionally low to avoid, as much as possible, decomposition of blood in the needle of the syringe.) The electrometer is set at a range and attenuation adequate to give a full scale ethanol deflection of the recorder from injection of the 0.50 g% standard with internal control. This attenuated signal is connected to one pen of a dual pen recorder (see below).

2. Integrator: The unattenuated electrometer signal is connected directly to a Hewlett-Packard 3370B digital integrator set at the following parameters;

Noise Suppression	maximum
Up Slope Sensitivity	0.03mV/min
Down Slope Sensitivity	0.3 M
Baseline Reset Delay	zero
Area Threshold	1000 mV/min
Front Shoulder Control	on
Rear Shoulder Control	1000mV
Recorder Presentation	100mV

The 100 mV (fullscale) signal from the integrator is connected to the recorder.

3. Recorder: The recorder used is a Hewlett-Packard 12 inch, 1 millivolt dual pen model used at a chart speed of ¼ inch per minute.

4. Glassware: All volumetric glassware used is Class A Pyrex. All measurements are made at ambient temperature using standard technique. Blood is measured with Ostwald-Folin pipets (Hawk, Oser, Summerson, *Practical Physiological Chemistry*, 13th ed., New York, 1954, p. 542).

Procedure:

1. Alcohol Stock Solution: Alcohol standards are prepared in terms of grams per 100 cubic centimeters in accordance with the Louisiana Implied Consent Law. Absolute ethanol from a freshly opened bottle is used. An alcohol solution of 50 g/l is prepared by measuring 62.5 ml of the alcohol into a 1000 ml volumetric flask. Considering the density of the alcohol to be 0.8 g/ml:

62.5 ml X 0.8 g/ml = 50 g ethanol

The volume is made to the mark with water, allowed to equilibrate at room temperature, and made again to the mark if necessary. This 5 g% solution is then dispensed into 5 ml glass ampuls and rapidly sealed by fusion. Each ampul is numbered in the order prepared. The entire liter quantity is thus preserved for use as needed. A 10% ordered sample is taken for oxidative analysis as described below (Analysis of Alcohol Standards. . .), in order that the exact alcohol content be established by relating it to the potassium dichromate primary standard.

2. Internal Control: For the purpose of controlling the volume of injection in the gas chromatograph, an internal control is used. One milliliter of l-propanol is diluted to 500 ml with water for this purpose. This solution is made up only as required, as it is quite stable. The exact concentration is not critical, but should be identical for all samples within a given batch of blood analyzed and should produce a peak of height approximately the same as a 0.10 g% ethanol solution.

3. Working Standards: One of the 5 g% stock ampuls is opened and 1.00 ml of the ethanol solution is delivered into volumetric flasks of 100, 50, 25, and 10 ml capacity. When made to the mark with water, the resulting solutions will have (nominal) concentrations of 0.05, 0.10, 0.20 and 0.50 g%, respectively. These solutions will be treated exactly as the unknowns and will be used for the purpose of establishing a calibration curve for the unknowns. Parker *et al.* (Anal. Chem., 34 p. 1234, 1962) have shown that aqueous standards may be used for calibration of a direct injection method but this fact should be explicitly demonstrated.

4. Unknowns: Exactly 1.00 ml of the unknown blood (measured by Ostwald-Folin pipet—working standards are measured by transfer pipet) is delivered into a glass or plastic vial of approximately 10 ml capacity fitted with a plastic snap cap. Exactly 1.00 ml of the internal control solution (measured with a single transfer pipet) is delivered into each vial. All unknowns are prepared in duplicate; standards are prepared as singlets. For the purpose of preparing duplicates, blood is drawn from separate tubes if more than one is available. If clotted blood must be analyzed, the clot is homogenized in a Ten Broeck tissue homogenizer. If serum or urine must be analyzed they are treated as blood, but reported as serum alcohol or urine alcohol. The vials are capped and mixed. A small hole is punctured in the center

of each cap to allow introduction of the syringe needle without removing the cap. The loss of alcohol through this opening is insignificant over reasonable periods of time (several hours). The holes should be sealed with plastic tape if it is not possible to begin injections immediately.

5. Control Bloods: Out of date transfusion blood is obtained and checked by direct injection to determine that it is free of ethanol. In a 250 ml volumetric flask, place 5.00 ml of the 5 g% stock ethanol solution. Fill to the mark with blood at room temperature. After thorough mixing, the blood will contain 0.10 g% ethanol (nominal). This blood is dispensed into clean empty test tubes in 2 ml amounts, stoppered and frozen on their sides for later use. Each batch of unknown samples should contain one of these controls as well as an ethanol-free blood sample prepared similarly. The analysis of the 0.10 g% blood control should give results within 0.01 g% of the value determined by an oxidative method (e.g. modified Kozelka-Hine, such as in Kirk, P.L., Crime Investigation, Interscience, New York, 1953, p. 751), which confirms both the accuracy of the concentration and the adequacy of aqueous standards. The negative control blood should give a result less than 0.01 g%. If the blood controls do not meet these criteria the results should not be reported.

6. Sample for Injection: A Hamilton No. 701 microsyringe (or equivalent) is used for injection into the gas chromatograph using the following technique. Water is drawn into the syringe not quite to the 2 microliter mark, excluding air bubbles. The plunger is then drawn back to the 2 microliter mark, pulling a short "plug" of air into the needle of the syringe. The needle is then introduced into the sample and the plunger is withdrawn to the 3 microliter mark, pulling 1 microliter of sample into the needle. The plunger is then withdrawn sufficiently to pull half a microliter of air into the needle. An additional microliter of water is drawn into the syringe to rinse blood from the needle into the syringe barrel, followed by sufficient air so that the water "plug" is entirely visible. At this point the exact volume of the sample is observed under a magnifying lens in suitable lighting to determine that a one microliter sample has been obtained. Immediately upon injecting the sample into the gas chromatograph the syringe is withdrawn from the injector port, the integrator started, and a syringe-full of water is pulled into the syringe. A wire of diameter just smaller than the bore of the syringe needle is now threaded through the needle until it is visible in the syringe barrel. This wire is moved back and forth several times to insure that all blood deposits have been removed from the inner surface of the needle. The wire is removed, the water forced from the syringe and the syringe is rinsed 10 times with water. Using this injection technique, no difficulty will be experienced with clogged syringe needles and good replication of injection is assured. The plunger of the syringe should be removed between injections and wiped thoroughly with a chem-wipe or clean tissue.

7. Protocol for Injections:

   a. The series of standards is injected in ascending order of concentration (single injections).

   b. The alcohol-free blood control is injected (single injection).

   c. The unknown duplicates are injected (single injections).

   d. The (nominal) 0.10 g% control blood is injected (single injection).

Calculation:

The ratio of the ethanol response to the propanol response will be directly proportional to the ethanol concentration since the propanol concentration is held constant in all samples. If response to both ethanol and propanol are linear over the range of application (0 - 0.5 g%) then the response ratios are described by the equation

$$y = a_o + a_1 x$$

where x = alcohol concentration in g%
y = response of EtOH/response of PropOH
a_o = intercept
a_1 = slope

This equation may be fitted to the calibration data by the method of least squares. Unknown values may be derived from the equation by solving the equation for x,

$$x = \frac{Y - a_o}{a_1}$$

and substituting the observed values of y for the unknown bloods. Treatment of the data in this manner will:

1. reveal any constant bias of the method, reflected in a_o.

2. reveal the sensitivity of the method, reflected in the slope a_1.
3. reveal non-linearity in the response of the ethanol or propanol in the correlation coefficient, r, derived in the method of least squares: $|r| = 1$ in the case of perfect fit, $|r| < 1$ in most real situations.

Further, the mathematics of the least squares approach lends the method to statistical analysis for the purpose of placing confidence limits on the values derived or for the purpose of statistical comparison with other methods.

Retention Times:

To distinguish ethanol from other volatiles which may be present in the blood the retention time difference of the ethanol peak and the propanol peak is determined. This approach is not useful for comparison of day-to-day results due to slight variations of operating parameters and column performance. For within-batch comparisons, however, the replication is excellent and obviates the need to accurately time the injection or column hold-up, since the difference is not affected by these values. The retention time difference for the unknown bloods should match that of the standards and the 0.10 g% control blood within 0.03 minutes (1.8 seconds), with an absolute retention time for ethanol on the order of one minute.

Analysis of Alcohol Standards
by
Potassium Dichromate Oxidation

General: Standard terminology is used throughout to indicate precision of measurement (e.g. $0.009 < 0.100 < 0.101$ but $0.09 < 0.10 < 0.11$) except for volumetric glassware. Pipets and volumetric flasks used are all Class A and appropriate precision is assumed, burets are of the Machlett Auto-Buret type, 10 ml capacity, $\pm$ .02 ml tolerance. Standard pipet technique is observed with a 15 sec. drain time.

Preparation of Samples: Ten per cent of the 5 g% stock ampuls prepared are chosen in order of preparation (i.e. 1, 11, 21, 31, etc.). These are opened in turn and 1 ml is immediately withdrawn by pipet and delivered into a 50 ml volumetric flask. The flask is filled to the mark with distilled water, rinsing down all stock solution into the body of the flask. This dilution is repeated for all samples, yielding, when made to the mark with water and completely stirred, solutions of 1.10 g% ethanol concentration.

Method: The alcohol in 1 ml of diluted sample (1 mg) is oxidized by a known quantity of potassium dichromate in 45% sulfuric acid. The heat generated by diultion of conc. sulfuric acid is used to complete the oxidation. This is accomplished by layering 5 ml (approx. by pipet or graduate) conc. sulfuric acid under a solution of 5 ml (buret) 0.100 N Potassium dichromate and 1 ml (pipet) of sample, then swirling to mix. (This is entirely satisfactory for the oxidation of 1 mg of alcohol, but incomplete oxidation becomes apparent with samples containing more than 2 mg of alcohol.) The sulfuric acid used must be of the best quality—even reagent grade frequently contains reducing material and will be associated with high blanks. It is imperative that the same lot of acid be used for any batch of analyses.

The reaction mixture is then diluted to less than 10 per cent sulfuric acid concentration with distilled water and an excess of potassium iodide added. The liberated iodine is titrated with 0.1 N Sodium thiosulfate, using freshly prepared 1% starch solution (prepared by heating with constant stirring up to the boiling point) to indicate the equivalence point.

To avoid side reactions it is necessary that the sulfuric acid concentration be less than 10 per cent, and that local excess of thiosulfate not occur. Further error may be encountered if the solutions are allowed to stand after liberation of iodine—both through evaporation of iodine from the solution and auto-oxidation of potassium iodide in contact with air. Consequently, after addition of potassium iodide, the tritration is completed as quickly as is consistent with precaution against local excess of thiosulfate.

Chemistry: The reactions involved may be described by the following quations;

$$Cr_2O_7^{--} + 14H^+ + 6e^- \rightarrow 2Cr^{+++} + 7H_2O$$

$$CH_3CH_2OH + 4OH^- - 4e^- \rightarrow CH_3COOH + 3H_2O$$

$$2K_2Cr_2O_7 + 8H_2SO_4 + 3CH_3CH_2OH \rightarrow 2Cr_2(SO_4)_3 + 11\,H_2O + 3CH_3COOH + 2K_2SO_4$$

Calculations: It follows, therefore, that the equivalent weight of potassium dichromate is 1/6 the formula weight or 49.03 grams, and that a 0.100 N solution contains 4.903 grams per liter. The equivalent weight of ethanol is ¼ the formula weight or 11.52. The milliequivalents of dichromate consumed in the oxidation (which equals the milliequivalents of alcohol oxidized) is given by the expression

$N_d V_d - N_t V_t$

where N_d = normality of the standard dichromate
V_d = volume (ml) of the dichromate solution used in the sample oxidation
N_t = normality of the thiosulfate solution
V_t = volume (ml) of the thiosulfate used in the sample tritration

This may be converted into milligrams of alcohol by multiplying by the milliequivalent weight of alcohol, 11.52. The per cent of alcohol is the sample may be obtained from this by converting to grams, dividing the expression by the volume of the sample in milliliters and multiplying by 100 (g%). Thus (where V = sample volume):

$$x = \frac{11.52}{10\,V_s}\,(N_d V_d - N_t V_t)$$

Now, from the titration blank we know that

$$N_d V_d = N_t V_{bt}$$

where V_{bt} = volume of thiosulfate required by the blank. Solving for N_t and substituting, we obtain the expression from which the per cent alcohol may be calculated:

$$x = \frac{11.52}{10\,V_s}\,N_d V_d\,(1 - V_t/V_{bt})$$

Since adherence to the procedure causes V_d = 5.00 ml, V_s = 1.00 ml, and N_d = 0.100, then

$$x = 0.576\,(1 - V_t/V_{bt}) \qquad \text{q.e.d.}$$

Procedure: Twice the number of 250 ml Erlenmeyer flasks as there are samples, scrupulously clean, are loaded with 5.00 ml of 0.100 N potassium dichromate each. Exactly 1 ml of distilled water is run into each of half the flasks. The remaining flasks are loaded with exactly 1 ml of the diluted samples. Each flask in turn is treated as follows: Five ml of conc. sulfuric acid is carefully run down the side of the flask to form a layer under the potassium dichromate/sample solution; the neck of the flask is covered with an inverted beaker; the flask is swirled to mix the contents completely. The flasks are allowed to stand for fifteen minutes to allow completion of the oxidation and to cool. If the flasks are not at room temperature after this period, they should be cooled in tap or chilled water, then diluted with 50 ml of distilled water each.

Titrate each flask in turn as follows: Add approximately 0.2 g of solid potassium iodide to the flask and swirl to accomplish complete solution. Titrate with 0.10 N sodium thiosulfate, avoiding local excess, to the appearance of a slight greenish cast–but not to the absence of the straw color. Add five drops of a freshly prepared 1% starch solution, producing the characteristic starch-iodine blue. Continue the titration with care to the disappearance of the blue color. Record the volume required to titrate samples as V_t and those required for blanks as V_{bt}. The range of the V_{bt}'s should be no greater than 0.10 ml. Take the average of the V_{bt}'s for use in all calculations.

Treatment of Data:

1. Calculate the alcohol concentration of each sample.

2. Graph the concentration versus the ampul number and observe any trend in the data which will necessitate discarding the entire batch of ampuls.

3. Determine the mean, standard deviation and standard error of the mean. Determine the 99 per cent confidence interval of the mean. If this interval does not include 0.10 g%, appropriate adjustment of the nominal concentration of the stock ampuls should be made. If the 99 per cent confidence limits exceed $\pm$0.010 g%, the analysis should be repeated or the batch of ampuls discarded as the precision does not meet the recommendation of the U.S. Traffic Safety Bureau for the analysis of blood alcohol.

* * * *

Exhibit N

Blood Alcohol Determination

The procedure for the determination of blood alcohol which is described here is essentially that of Kirk, Gibor and Parker (Anal. Chem. 30, 1418, 1958). The apparatus described by these authors is obtained from Microchemical Specialities Co., Berkeley, California. Deviation from the method is made in the measurement of the sample. As it is desirable to express the alcohol concentration in true weight per cent (milligrams per one hundred milligrams of blood), the blood samples are weighed onto the filter paper rather than measured volumetrically. Thus no assumption need be made as to the specific gravity of the sample. To accomplish this the blood is drawn into a one (1) milliliter pipette (or a pipette of volume commensurate with the weight of sample desired), the tip wiped clean with absorbent paper and covered with a small rubber bulb from a dropping pipette (to allow free handling of the filled pipette) and weighed on a torsion balance, estimating to

miligrams. The blood is now drained onto the filter paper and the rubber bulb replaced. The pipette is weighed again and the weight of the blood sample determined by difference.

Minor deviations from the original procedure lie in the use of thyodene (Fisher) instead of starch solution, the use of solid potassium iodide instead of the potassium iodide solution used by the authors. It has been found convenient to bring the water in the outer jacket of the apparatus to a boil before adding reagents.

Procedure:

Water is needed to the outer jacket of the apparatus in sufficient quantity to cover the lower half of the inner jacket. Suction is applied to the apparatus such that when the stopper is in place, air slowly bubbles into the apparatus. Seven (7) milliliters of saturated aqueous mercuric chloride and seven (7) milliliters of ten (10) per cent sodium hydroxyde are carefully introduced into the inner vessel, with precautions to avoid wetting the walls of the funnel with the reagents. A previously prepared strip of filter paper is folded to five (5) by fifteen (15) centimeters and rolled so as to slip into the funnel, with the folded section forming a pocket inside the roll. The toll of filter paper is inserted through the top of the apparatus into the funnel. (The filter paper strips are prepared by immersing the 5 by 15 cm strips in a solution of 20% sodium dehydrogen phosphate and 2% magnesium chloride and allowing them to dry at room temperature.)

To the digestion tube is added 5.00 milliliters of standard dichromate solution (preferably 0.1000N=4.903 g/1), followed by approximately five (5) milliliters of concentrated sulfuric acid. The concentrated acid heats the solution in the digestion vessel rather strongly. The digestion tube is attached to the distillation vessel and the suction adjusted to a rate sufficient to allow the bubbler to function in breaking up the air but avoiding violent turbulence in the apparatus.

A blood sample (approximately one gram) is now weighed directly onto the filter paper. Suction must be continued during this period to prevent loss of alcohol vapor. The stopper is immediately placed in position and held down by springs. Heating of the vessel must be adjusted to a rate just sufficient to guarantee that the entire inside of the vessel is full of steam, but distillation fo water is negligible. When properly adjusted, about five (5) milliliters of water will distill into the receiver in 25 to 30 minutes. During 25 to 30 minutes of aeration, the alcohol and the small amount of water are transferred to the hot acid dichromate mixture in the digestion tube. Because of the high acidity and temperature of the dichromate solution, alcohol will be oxidized immediately in that chamber and, by the end of the distillation, all of the alcohol is oxidized.

The digestion tube is disconnected from the remainder of the apparatus and the acid dichromate is transferred into a 125 milliliter Erlenmeyer flask. The sintered-glass bubbler is washed thoroughly with several applications of distilled water, which is collected in the digestion tube, washing both bubbler and tube. All washings are combined with the dichromate solution in the Erlenmeyer flask. The total volume should be such that the sulfuric acid is not stronger than 10 per cent (50 ml.).

An excess of solid potassium iodide (approximately five grams) is added to the dichromate solution. The liberated iodine is immediately titrated with approximately 0.1N (=25 g/1 + 0.1 g $NaHCO_3$,) thiosulfate solution, using thyodene (Fisher) at the end to determine the exact equivalence point. A blank determination is subsequently made, using 5.00 milliliters of the standard dichromate and five milliliters of sulfuric acid.

The apparatus is cleaned by up-ending the distillation vessel and draining all solutions contained in it. The filter paper is removed and the entire apparatus flushed with water or, if necessary, a cleaning solution. Both the inner and outer chambers of the distillation vessel are emptied simultaneously and completely by turning the appartus upside down.

Calculations:

where N_d = normality of the standard dichromate solution
N_t = normality of the thiosulfate solution
V_d = volume of the dichromate solution used in sample digestion
V_t = volume of the thiosulfate used in the sample titration
V_{bd} = volume of the dichromate solution used in the titration blank
V_{bt} = volume of the thiosulfate used in the titration blank
W_s = weight of the sample in grams
11.51 = equivalent weight of ethanol (¼ the molecular weight)
x = per cent alcohol by weight

We see that the milliequivalents of dichromate consumed in the oxidation (which equals the milliequivalents of alcohol oxidized) is given by the expression.

$$N_d V_d - N_t V_t$$

This may be converted to milligrams of alcohol by multiplying by the milliequivalent weight of alcohol, 11.51. The per cent of alcohol in the sample may be obtained from this by dividing the expression by the weight of the sample in milligrams and multiplying by 100. (Which is equivalent to dividing by ten times the weight of the sample in grams)

$$x = (N_d V_d - N_t V_t)\frac{11.51}{10\,W_s}$$

From the titration blank we know that

$$N_d V_{bd} = N_t V_{bt} \text{ or } N_t = \frac{N_d V_{bd}}{V_{bt}}$$

Substituting, we obtain the expression from which the per cent alcohol may be calculated

$$x = \left\{N_d V_d - \frac{N_d V_{bd} V_t}{V_{bt}}\right\} \frac{11.51}{10\,W_s}$$

Since adherence to the procedure causes $V_d = V_{bd} = 5$, the expression simplifies to

$$x = 5.755\frac{N_d}{W_s}\left\{1 - \frac{V_t}{V_{bt}}\right\}$$

RULES

Louisiana Health and Human Resources Administration

(Editor's Note: The following rules were adopted by the Health and Human Resources Administration on November 7, 1975, to be effective on December 20, 1975.)

Regulations Defining Skills, Knowledge, and Experience for Water and Sewage Works Operators in Louisiana

Pursuant to Section 8 of R.S. 40:1141-1151 Act 538 1972, Water and Sewerage System Operator Certification Law, the following rules and regulations are hereby adopted prescribing skills, knowledge, and experience that an operator in responsible charge must demonstrate for proper supervision of the various water and sewerage facilities: namely, water production, water distribution, water treatment, sewage collection, and/or sewage treatment and disposal.

I. Knowledge (Education) and Experience

All operators of water and sewage works shall demonstrate that he has acquired the levels of education and experience as shown in table I, below.

TABLE I

OPERATOR QUALIFICATIONS

Minimum Education (Ed.) and Experience (Exp.) Requirements (years)

Operator Class	I		II		III		IV	
	ED.	EXP.	ED.	EXP. (a)	ED.	EXP. (b)	ED.	EXP. (c)
Waste Water Collection	12	1	12	2	–	–	–	–
Waste Water Treatment	12	1	12	2	14	3	16	4
Water Production	12	1	12	2	14	3	16	4
Water Treatment	12	1	12	2	14	3	16	4
Water Distribution	12	1	12	2	14	3	16	4

(a) Two years of acceptable experience in a Class I or higher operation.
(b) Three years of acceptable experience in a Class II or higher operation. Two years of which must have been in a position of major responsibility.
(c) Four years of acceptable experience in a Class III or higher operation, two years of which must have been in a position of major responsibility.

Substitutions

A. Experience For Education:

1. One year of supervisory experience may be considered as equivalent to two years of education.

2. One year of non-supervisory experience may be considered as equivalent to one half year of education.

3. Only a maximum of four years' experience may be applied.

4. Experience applied to education may not also be applied to the experience requirements.

B. Education For Experience:

1. One year of appropriate college may be considered as equivalent to two years of general experience or one year of experience in responsible charge.

2. Each thirty semester hours of college credit may be substituted for one year general experience. (Thirty semester hours = forty-five quarter hours = one year.)

3. Substitution of education for experience is limited to a maximum of fifty percent of the experience requirement.

4. Education applied to experience requirements cannot also be applied to education requirement.

C. For Formal Education:

1. High School: high school diploma = GED or other equivalent = twelve years. A grade equivalent diploma (GED) or equivalent can be substituted for a formal high school diploma and be counted as twelve years of education.

2. Training Credits (T.C.) for specialized operator training courses, seminars, college or university sponsored courses, approved technical conferences; etc.: six classroom hours of operator courses shall equal one T.C. and forty-five T.C. shall equal one year of education.

3. It will be the responsibility of the individual seeking to apply training credits as substitution for formal education to produce evidence of attendance at operator training courses.

Examples of operator training courses include:

a. Louisiana Annual Short Course for Water and Sewerage Works Operators—Baton Rouge.

b. Regional 1-2 day Conferences sponsored by Louisiana Conference on Water Supply and Sewerage.

c. Annual Southwest Section AWWA Conference, Technical Sessions, and Annual AWWA Conference.

d. AWWA Sponsored Seminars and Workshops.

e. College or University Sponsored Water or Wastewater Courses.

f. WPCF Annual Conference, Technical Session.

g. WPCF regional meetings, technical sessions, or seminars.

II. Skill Level Requirements

A. Water Production

Class I

(a) Know the hydrologic cycle, the sources of water, and their physical, chemical, and biological characteristics.

(b) Know the potable water requirements as to quantity and chemical and bacteriological quality.

(c) Know the relative merits of the two waters by source.

(d) Know the types of pumps used and the relationship of capacity to head.

(e) Know how to compute well, line, or tank volumes and convert flow rates and pressures.

(f) Know how to collect water samples, both surface and from production facilities.

(g) Understand basic mechanical and electrical principles as they apply to facilities of this type and class.

(h) Know the sanitary considerations of well location.

(i) Know the sanitary considerations of watersheds.

(j) Know the reasons for disinfection, methods of disinfection, and testing requirements.

(k) Know the sanitary aspects of well construction.

(l) Know the purpose of a well and an intake structure, their similarities, and differences.

(m) Know safe handling and storage of chlorine and other chemicals used in water production.

(n) Know and understand the hazards of cross-connections and how to prevent them.

(o) Know and understand the safe use of chlorine and other chemicals for sterilization.

(p) Know and understand basic capacity calculations and velocity calculations as applies to water production.

(q) Know and understand water quality standards as formulated by U.S.P.H.S., E.P.A., Health Department, or other governmental agencies.

(r) Know how to run a calibration check on a solution feeder.

(s) Know the proper maintenance procedure for feeders.

Class II.

(a) Know all skills required in the lower class.

(b) Know the hazards or undesirable effect of various materials in water.

(c) Know how to select sampling points for chemical and bacteriological samples.

(d) Know how to sample, preserve, and transport samples.

(e) Know what common nuisance organisms are, what problems they cause, and how they might be corrected.

(f) Know how to operate a residual chlorination system, including the computation of material requirements and feed rates.

(g) Know how to compute disinfection dosages.

(h) Know the merits of various types of pumps and the basic parts of each.

(i) Know how to compute pump work and horsepower requirements.

(j) Know the basis for screen size, materials used, and the use of gravel wall or gravel packed wells.

(k) Know the effect of land use on a watershed and water quality.

Class III.

(a) Know all skills required in lower classes.

(b) Know how to calculate pumping heads and pumping costs.

(c) Know how to determine adequacy of supply with partial failure to meet demands.

(d) Know how to make emergency repairs or temporary replacement of equipment to provide continuous supply.

(e) Know how to set up and carry out a preventative maintenance program.

(f) Know how to measure waterflows, calculate pump rates from flows or from fill or withdrawal volumes.

(g) Understand the principles and applica-

tions of instrumentation and controls which are common with such systems of this class.

(h) Know how to select a pump from head capacity curves and be able to interpret a pump performance curve.

(i) Know the causes of decreased well production and how they may be corrected.

(j) Know the sources of data on wells and water quality in various aquifers.

(k) Know the problems caused by algae in an impoundment and methods of control.

(l) Know the causes of and the effects of water hammer as they relate to production facilities.

(m) Know and understand the principles of aeration, chlorination, coagulation, flocculation, sedimentation, filtration, taste and odor control, and quality control.

(n) Know how to calculate chemical dosage.

(o) Know the safety features of a properly designed chlorine equipment/storage building.

(p) Know safety aspects of water production.

(q) Know the operation and control of chlorination systems including gas and hypochlorination equipment.

(r) Know the various types of valves, pumps, and similar equipment, and the operation and maintenance of each.

(s) Know how to compute chemical requirements in production and the costs thereof.

Class IV.

(a) Know all skills required in lower classes.

(b) Know how to prepare and interpret pump performance curves from given test data.

(c) Know how to determine economical pump replacement schedules.

(d) Know the methods of water treatment and their capability to remove undesirable materials.

(e) Know how to determine production costs and make cost reports.

(f) Understand the basic principles and application of flow formulae for orifices, venturis, or weirs.

(g) Know how to plan and carry out a watershed sanitation program.

(h) Know how to measure evaporation and calculate the water loss from an impoundment by evaporation.

(i) Know the cause of drawdowns, its effect on adjacent wells, and what should be done to minimize the effect in selecting well location.

(j) Know how to determine manpower requirements to provide continuous plant operation.

B. Water Treatment

Class I.

(a) Know the reason for adding fluoride to water, the amount desired, and the method of testing necessary.

(b) Know the fluoridation chemicals most commonly used, their characteristics, and handling procedures.

(c) Know the reason for adjusting pH and what pH is a measure of.

(d) Know what chemicals are used to adjust pH, their characteristics, and handling procedures.

(e) Know what is meant by a comparator, how it is used, and how to minimize reading errors.

(f) Know the various types of feeders used in this type and class facility and how the chemicals are fed.

(g) Know how to run a calibration check on a solution feeder.

(h) Know the maintenance procedure for feeders.

(i) Know the reason for chlorinating, the materials used, the methods of application, and the test procedures.

(j) Know the quantitative per capita water requirements.

(k) Know the safe handling of chlorine and other chemicals used in water treatment.

(l) Know and understand the hazards of cross-connections and how to prevent them.

(m) Know and understand use of chlorine and other chemicals for sterilization.

(n) Know and understand basic capacity calculations and velocity calculations as applied to water treatment.

(o) Know and understand water quality standards as formulated by U.S.P.H.S., E.P.A., Health Department, or other governmental agencies.

Class II.

(a) Know all the skills required in the lower class.

(b) Know what impurities are found in water and what undesirable effects they cause.

(c) Know what materials may be removed by degasification (aeration) equipment as well as the problems created by such equipment.

(d) Know what impurities can be neutralized and/or oxidized by chemical feed and what chemicals are so used.

(e) Know what ion exchange is and what it is used to remove, what media are capable of.

(f) Know the operation and maintenance procedures for ion exchange units (both softening and Fe-Mn removal).

(g) Understand the basic principles of and the operation of iron removal plants using oxidation followed by settling and/or filtration.

(h) Know what tests are run on plants in this type and class and be able to run them.

(i) Know how to collect chemcial and bacteriological samples from a plant.

(j) Know how chlorine demand is determined and the various forms of residual chlorine.

Class III.

(a) Know all skills required in lower classes.

(b) Know the physical and bacteriological characteristics of surface water and well waters.

(c) Know the drinking water standards for potable water.

(d) Know what chemicals are used in water treatment, what they do, and how they are handled.

(e) Know how chemicals are fed and the operation and maintenance of feeders, including calibration.

(f) Know how to run jar tests.

(g) Know how to run all chemical tests for chemical coagulation and softening plants.

(h) Know the purpose of, operations, control, and maintenance of mixing equipment.

(i) Know the operation, control, and maintenance of flocculation equipment.

(j) Know the purpose, operation, control, and maintenance of settling tanks, including comparison of upflow and straight line units.

(k) Know the purpose, operation, control, and maintenance of filters, including appurtenances such as loss of head gages and rate of flow controllers.

(l) Know the operation and control of chlorination systems including gas and hypochlorination equipment.

(m) Know the safety aspects of water treatment and know the safety features of a properly designed chlorine equipment/ storage building.

(n) Know the various types of valves, pumps, and similar equipment and the operation and maintenance of each.

(o) Know how to computed chemical requirements and costs of water treatment.

(p) Know how to compute pump rates, filter rates, horsepower requirements.

(q) Know how bacteriological tests are run and be able to interpret results.

(r) Know how to compute retention times.

(s) Know how to find the break-point for chlorination and understand the process of breakpoint chlorination.

(t) Know and understand the principles of aeration, chlorination, coagulation, flocculation, sedimentation, filtration, taste, and odor control and quality control.

(u) Know how to calculate chemical dosage.

(v) Know how to read and interpret a pump performance curve.

Class IV.

(a) Know all skills required in lower classes.

(b) Know how to select treatment methods for various raw water characteristics.

(c) Know how to estimate chemical dosage from raw water analysis and finished water requirements and compute chemical requirements to treat a given amount of water.

(d) Know how to prepare and interpret pump performance curves from given test data.

(e) Know how to determine treatment costs and make cost reports.

(f) Know how to determine manpower requirements to provide continuous plant operation.

(g) Know how to set up a bacteriological testing program, including knowing the laboratory procedures.

(h) Know how to plan and carry out a watershed sanitation program.

(i) Know how to measure evaporation and calculate water loss from an impoundment by evaporation.

(j) Know how to plan and carry out a public relations program.

C. Water Distribution

Class I.

(a) Know the hydrologic cycle, the sources of water, and their physical, chemical, and biological characteristics.

(b) Know the potable water requirements as to quanitity and chemical and bacteriological quality.

(c) Know the names, uses, and operation of appurtenances used in systems of this size class.

(d) Know the materials, construction methods, and installation procedures for distribution systems in this class.

(e) Know the materials, procedures, and testing methods for disinfection.

(f) Know the purposes, methods, and testing procedure for residual chlorination and know safe handling of chlorine and other chemicals used in water distribution.

(g) Know the types of pumps used and the relationship of capacity to head.

(h) Know the purpose of metering, reading, and simple field checking.

(i) Know how to compute tank capacities and convert flow rates and pressures.

(j) Know how to collect water samples.

(k) Know the purposes and procedures for flushing.

(l) Understand basic principles of mechanical and electrical principles as they apply to this class facility.

(m) Know the definition of cross-connection and the hazards of them.

(n) Know and understand the safe use of chlorine and other chemicals for sterilization in distribution system use.

(o) Know and understand basic capacity and velocity calculations as applies to water distribution.

(p) Know and understand water quality standards as formulated by U.S.P.H.S., E.P.A., Health Department, or other governmental agencies.

Class II.

(a) Know all skills required in lower class plus.

(b) Know the disadvantages of various materials in water.

(c) Be able to identify common cross-connections and how to correct them.

(d) Know how to select sampling points in a distribution system, what bacteriological tests are commonly run, and the meaning of the results.

(e) Know what common nuisance organisms are, what problems they cause, and how they might affect consumers and basic control methods.

(f) Know how to operate a residual chlorination system including computation of material requirements, feed rates.

(g) Know how to compute disinfection dosages.

(h) Know effect of metering errors.

(i) Understand basic principles of distribution system hydraulics as related to pipe type, roughness, size, fittings length.

(j) Know the advantages and disadvantages of various types of pumps and the basic parts of each.

(k) Know the sanitary features, operation and maintenance procedures for storage tanks and appurtenances in this class.

(l) Know how to compute horsepower and work in computing pumping requirements.

(m) Know how to compute friction loss in pipe lines.

Class III

(a) Know all skills required in lower classes, plus.

(b) Know how to calculate pumping heads and pumping costs.

(c) Know how to determine adequacy of production and storage to meet needs with partial system failure.

(d) Know how to plan a bacteriological sampling program and be familiar with test procedure.

(e) Know how to plan a cross-connection program.

(f) Know how to make emergency repairs or temporary replacement of equipment to provide continuous service.

(g) Know how to set up and carry out a preventative maintenance program.

(h) Know the causes of underaccounted for water, how to minimize it, and loss control techniques.

(i) Know how to measure water flows, calculate pump rates from flows or fill or withdrawal volumes.

(j) Understand basic principles of instrumentation and controls which would be common at systems of this class.

(k) Know how to select a pump from a capacity head curve and interpret the pump performance curve.

(l) Know the legal responsibilities of a water utility.

(m) Know the causes of loss of main carrying capacity and know how it may be corrected.

(n) Know distribution safety, i.e., traffic, trenching, first aid, and know the safety features of a chlorine storage building.

Class IV

(a) Know all skills required in lower classes, plus.

(b) Know how to prepare and interpret pump performance curves from given test data.

(c) Know how to determine economical pump replacement schedules.

(d) Know the basics of water treatment methods and their capability to remove undesirable materials which produce problems in water distribution systems.

(e) Know how to determine costs and make cost reports.

(f) Know how a meter shop is set up, its functions and operation.

(g) Know how to plan, carry out, and report a plant safety program.

(h) Understand the principles of the application of flow formulae for orifices, weirs, etc.

(i) Know how to plan and carry out a public relations program.

D. Sewage Collection

Class I.

(a) Know the sources and characteristics of sewage and expected flows.

(b) Know the sanitary aspects of sewage such as disease transmission, pollutional effect.

(c) Know the materials, jointing methods, and construction methods common in systems of this class.

(d) Know the types of pumps used and their advantages and disadvantages.

(e) Know the major methods of sewage treatment.

(f) Know the safety aspects of operation and construction of systems.

(g) Know the hydraulics of a collection system, especially size, slope, flow interrelationships.

(h) Know the maintenance and operational features of pumps, motors, and controls common to systems in this class.

(i) Know the hazards of cross-connections and be able to identify and correct those common in sewerage systems.

(j) Know the features of a maintenance program for a system in this class.

Class II.

(a) Know all the skills required in lower class.

(b) Know how to compute horsepower, work, and pumping costs.

(c) Know how to read and interpret pump operating curves.

(d) Know how to read and interpret system plans and maps.

(e) Know materials and construction methods common in this class.

(f) Know how to determine the carrying capacity of lines.

(g) Know how to conduct infiltration and/or leakage tests.

(h) Know how to check lines for proper line and grade.

(i) Know how to calculate flow or pumping rates from fill or drawdowns in wet wells.

(j) Know how to sample sewage and what tests are run, viz., M.P.N., B.O.D., C.O.D., pH, and D.O.

(k) Know the methods of cleaning lines including rodding, balling, buckets, and flushing, and the relative merits of each.

(l) Know the components of a good sewer ordinance.

E. Sewage Treatment (Oxidation Ponds)

Class I.

(a) Know the characteristics of sewage, its source and expected flows.

(b) Know the safety aspects of handling sewage, both physical and pathological.

(c) Know the physical appearance of a properly operating pond system.

(d) Know the effects of improperly treated sewage discharge on receiving streams.

(e) Know the purposes of and methods used in aeration of ponds.

(f) Know the physical features of a pond and the purposes of each.

(g) Know the basic maintenance procedures necessary on a facility of this type.

(h) Know the other basic types of sewage treatment and the relative merits of each.

(i) Know the purpose of effluent chlorination and methods used.

Class II.

(a) Know all the skills required in the lower class.

(b) Know the design criteria for oxidation ponds.

(c) Know the sampling methods for facilities of this class.

(d) Know how to run D.O. tests, pH tests, and chlorine residual tests.

(e) Know the meaning of B.O.D. and M.P.N. results and the general methods used in testing.

(f) Know the relationship of flow, chlorine demand, and chlorine requirements, and able to make appropriate calculations.

(g) Know how to calculate retention times at various operation levels.

(h) Know how aeration equipment works, the relative merits of the types, the maintenance features of each.

(i) Know how to make cost reports and analyses and determine whether aeration equipment or larger ponds might be more economical with proper data provided.

(j) Know the community relations aspects of use of oxidation ponds.

Sewage Treatment (Activated Sludge)

Class III–A

(a) Know the characteristics of raw sewage, its sources and expected flows.

(b) Know the safety aspects of sewage treatment operations, including hazards of cross-connections.

(c) Know the various types of valves and pumps used in treatment works and their maintenance procedures.

(d) Know the source of grit, its detrimental effects on plant facilities, and the purpose, operation, and maintance of grit removal equipment.

(e) Know the purpose, operation, and maintenance of screens and grinding equipment.

(f) Know the purpose, operation, and maintanance of sedimentation equipment including B.O.D. and suspended solids expected removals and the effect of detention time.

(g) Know the diseases transmitted by sewage and the general effect of discharging

insufficiently treated sewage into a stream.

(h) Know the purpose and methods of drawing sludge and the characteristics of sludge.

(i) Know the purpose, operation, control, and maintenance of digesters, and the methods of disposing of sludge drying beds and sludge lagoons.

(j) Know the purpose, operation, control, and maintenance of chlorination equipment including residual testing and know what M.P.N. is and be able to interpret results.

(k) Know what instrumentation and control equipment is common to plants of this type and class and know how to read them.

(l) Know why records are kept, what reports should be submitted, and the value thereof.

(m) Know the basic mechanical and electrical principles as they relate to plants of this type and class.

(n) Know how to run the lab tests common to plants of this type and class, including D.O., sludge settleability, pH.

(o) Know the characteristics of mixed liquor, return sludge, and waste sludge, and the control of sludge return.

(p) Know how to operate, control, and maintain blowers, diffusers, and mechanical aeration equipment.

(q) Know the cause, effect, and control of sludge bulking, frothing, septicity in aeration tanks.

(r) Know the safety features of a properly constructed chlorine equipment/storage building.

(s) Know the safety aspects of chlorine and chemical handling.

Class IV–A

(a) Know all skills required in the lower class.

(b) Know how to run B.O.D. tests, M.P.N. tests, and interpret results.

(c) Know how to make a survey of the effect of the effluent on the receiving stream.

(d) Know how to calculate pumping costs, horsepower requirements, and interpret pump curves.

(e) Know how to determine treatment costs and make cost reports.

(f) Know how to determine manpower requirements to provide continuous plant operation.

(g) Know the purpose, operation and maintenance of sludge thickness, vacuum filters, centrifuges, and sludge incinerators.

(h) Know the general standards applicable to receiving streams and the responsibility for meeting them.

(i) Know the various methods of sewage treatment and be able to generally compare them.

(j) Know how to calculate chlorine required based on flow and chlorine dose rate desired.

(k) Know how to compare the operating cost of diffused air and mechanical aeration equipment.

(l) Know how to read and interpret blower operating curves.

(m) Know how to operate an aerobic digestor.

(n) Know how to adjust aeration systems and set up and carry out a preventative maintenance program.

(o) Know how to use control test results in correcting operation of a plant.

(p) Know how to run laboratory tests common to this type and class plant, including Sludge Volume Index and solids analyses.

(q) Know how to plan and utilize a public relations program.

Sewage Treatment (Bio Filtration)

Class III.–B

(a) Know the characteristics of raw sewage, its sources and expected flows.

(b) Know the safety aspects of sewage treatment operations, including hazards of cross-connections.

(c) Know the various types of valves and pumps used in treatment works and their maintenance procedures.

(d) Know the source of grit, its detrimental effects on plant facilities, and the purpose, operation, and maintenance of grit removal equipment.

(e) Know the purpose, operation, and maintenance of screens and grinding equipment.

(f) Know the purpose, operation, and maintenance of sedimentation equipment including B.O.D. and suspended solids expected removals and the effect of detention time.

(g) Know the diseases transmitted by sewage and the general effect of discharging insufficiently treated sewage into a stream.

(h) Know the purpose and methods of drawing sludge and the characteristics of sludge.

(i) Know the purpose, operation, control, and maintenance of digesters, and the methods of disposing of sludge including operation and maintenance of sludge drying beds and sludge lagoons.

(j) Know the purpose, operation, control, and maintenance of chlorination equipment including residual testing and know what M.P.N. is and be able to interpret results.

(k) Know what instrumentation and control equipment is common to plants of this type and class and know how to read them.

(l) Know why records are kept, what reports should be submitted, and the value thereof.

(m) Know the basic mechanical and electrical principles as they relate to plants of this type and class.

(n) Know the lab tests common to a plant of this type and class including pH, settleable solids, D.O., also know what B.O.D. is and how samples are taken and preserved.

(o) Know the safety features of a properly constructed chlorine equipment/storage building.

(p) Know the safety aspects of chlorine and chemical handling.

(q) Know the construction of, purpose, operation, control, and maintenance of biological filters, including the various types media selection, and distribution equipment.

(r) Know the capability of bio filtration plants to handle shock loads and know "trouble-shooting" methods applicable to plants of this type.

Class IV–B

(a) Know all skills required in the lower class.

(b) Know how to run B.O.D. tests, M.P.N. tests, and interpret results.

(c) Know how to make a survey of the effect of the effluent on the receiving stream.

(d) Know how to calculate pumping costs, horsepower requirements.

(e) Know how to determine treatment costs and make cost reports.

(f) Know how to determine manpower requirements to provide continuous plant operation.

(g) Know the purpose, operation, and maintenance of sludge thickness, vacuum filters, centrifuges, and sludge incinerators.

(h) Know the general standards applicable to receiving streams and the responsibility for meeting them.

(i) Know the various methods of sewage treatment and be able to generally compare them.

(j) Know the operation and control of multi-stage filtration.

(k) Know the effect of treated effluent on a water body and what steps may be taken to minimize such effects, viz., some common methods of tertiary treatment.

(l) Know how to select filter media.

(m) Know how to operate and control multi-stage digesters and how to run the various solids tests for control.

(n) Know how to calculate chlorine requirements based on flow rate and chlorine dose rate desired.

(o) Know how to use control test results in correcting operation of a plant.

(p) Know how to plan and utilize a public relations program.

William H. Stewart, M.D.
Commissioner

RULE

Louisiana Health and Human Resources Administration Division of Family Services

The Louisiana Health and Human Resources Administration, Division of Family Services, in accordance with the Administrative Procedures Act, has adopted as final regulations an increase in the resource limitations in the General Assistance Program effective January 1, 1976, as follows:

1. $600 if client has no one other than himself in his family unit.

2. $800 if client has one person in addition to himself in his family unit.

3. $1,000 if client has two or more persons in addition to himself in his family unit.

William H. Stewart, M.D.
Commissioner

RULES

Commissioner of Insurance

(Editor's Note: The following rule was adopted by the Commissioner of Insurance on November 20, 1975, to be effective December 20, 1975.)

Rule No. 2–Malpractice Self-Insurance

Pursuant to the direction of Act 817 of the 1975 Legislature, the Commissioner of Insurance has determined that the filing of proof of financial responsibility of self-insured health care providers can be satisfied by complying with the following requirements:

1. Depositing with the State Treasurer $125,000 in money or approved bonds of the United States, the State of Louisiana, or any political subdivision thereof, of the market value of $125,000, approval of such bonds to be made by the Commissioner of Insurance, or

2. A surety bond in the amount of $125,000 of an authorized surety company doing business in this state and approved by the Commissioner of Insurance.

3. The above deposit or surety bond shall be conditioned for the prompt payment of any malpractice loss claim against the health care provider which has been reduced to final judgment and such deposit or surety bond shall be subject to seizure and other judicial processes as provided by law in cases where final judgment has not been satisfied.

4. Substitution of deposits or surety bonds shall be subject to the approval of the Commissioner of Insurance.

5. Withdrawal of any bond or deposit may be made only on approval by the Commissioner of Insurance and only when the Commissioner of Insurance is satisfied that there are no outstanding claims against the health care provider.

6. Where the deposit has been seized by judicial process, the health care provider shall be notified immediately and shall be required to replace the deposit or surety bond within five days. Failure to replace such deposit or surety bond shall require the Commissioner of Insurance to withdraw the qualification of the health care provider under the Patients Compensation Fund.

Health care providers who qualify as self-insurers shall be surcharged on the basis of the Insurance Services Office rates filed with the Louisiana Insurance Rating Commission and shall pay the surcharge on an annual basis.

All health care providers who qualify as self-insurers shall notify the Commissioner of Insurance as soon as practicable of any malpractice liability claim made against it. When the preliminary investigation has been completed, a report shall be forwarded to the Commissioner of Insurance which shall include the nature of the injury and all other pertinent information relative to the claim.

Sherman A. Bernard
Commissioner of Insurance

RULES

Louisiana Department of Public Works

Section 2.0.0.0. Regulations and Standards for Water Well Construction

As announced in the Louisiana Register and in the Official Journal of the State, regulations and standards for water well construction were adopted June 17, 1975, and are to be effective December 20, 1975. The regulations and standards as stated herein were prepared in accordance with the provisions of State Act 535 (1972).

Section 2.1.0.0. Purpose

The regulations and standards for water well drilling and construction are intended for use when drilling and constructing wells used for public water systems and for use as guidelines or recommendations, when drilling, constructing, and developing wells used for other purposes. Use of the regulations and standards should minimize the chances of polluting and contaminating fresh water aquifers and reduce health and safety hazards associated with water well construction. The use of the regulations and standards as stated herein by the water well contractor, the planner, the engineer, and the water well owner should affect a longterm savings in money and energy and optimize the use of the State's water resources.

Section 2.2.0.0. Regulations

In Section 5A.3 of State Act 535 (1972), the Louisiana Legislature authorized the Director of the Louisiana Public Works Department,

> "To establish regulations governing standards for the construction of all wells drilled after the effective date of this Act..."

In accordance with this legislative directive, the regulations and standards stated herein were prepared by the Department of Public Works in close cooperation with the Louisiana Health and Human Resources Administration, Division of Health (formerly known as Louisiana Department of Health). The regulations and standards are intended to complement Chapter 8 of the Sanitary Code, State of Louisiana, titled "Water Supplies, Cold Storage and Ice Plants," in accordance with the Revised Statutes of 1950, Title 40, as amended.

Where the regulations and standards as stated herein conflict with those in the State of Louisiana Sanitary Code, the provisions of the Sanitary Code shall govern for wells used for public supply systems. For other wells, the landowner or lessee shall request clarification from the Health and Human Resources Administration and/or the Department of Public Works before proceeding with drilling and construction. (For addresses and phone numbers, refer to Section 2.2.3.0.).

Section 2.2.1.0. Effective Date

The effective date of the regulations and standards as stated herein is December 20, 1975.

Section 2.2.2.0. Reports

A. Wells used to supply water for public water

systems. The Louisiana Health and Human Resources Administration, Division of Health approves the design of and the use of wells used for public water systems. Regardless of yield, these wells must also be registered with the Louisiana Department of Public Works in accordance with the provisions of that Department's rules, regulations, and procedures for water well registration.

B. Wells used for purposes other than supplying public water systems and capable of producing 50,000 gallons per day or more must be registered with the Louisiana Department of Public Works in accordance with that Department's rules, regulations, and procedures for water well registration.

Section 2.2.3.0. Exceptions

Requests to vary from the regulations and standards as stated herein must be obtained from either the Louisiana Department of Public Works and/or the Louisiana Health and Human Resources Administration, Division of Health. Requests for variance for wells producing water for public water systems must be addressed to the Louisiana Health and Human Resources Administration. Requests pertaining to other wells can be addressed to either State agency. All requests must show that compliance is impractical and outline an alternative. Either or both State agencies may prescribe, in writing, alternate requirements that are equivalent to the regulations and standards relating to the prevention of pollution and contamination.

Requests for variances can be addressed to:

Director,
Louisiana Department of Public Works
Post Office Box 44155
Baton Rouge, Louisiana 70804

Attention: Water Resources Section
Telephone: (504) 389-6135

or

Louisiana Division of Health
Post Office Box 60630
New Orleans, Louisiana 70160

Telephone: (504) 527-5112

Section 2.2.4.0. Location

Section 2.2.4.1. Relation to Possible Sources of Contamination.

The horizontal distance from any possible source of contamination shall be as great as possible but in no case less than the following recommended minimum distances for locating wells in relation to possible sources of contamination:

Source	Distance in feet
Septic tanks	50
Storm or sanitary sewer	50[1]
Cess pools, outdoor privies, oxidation ponds, subsurface absorptions fields, pits, etc.	100[3]
Another water well	25[2]
Sanitary landfills, feed lots, manure piles, solid waste dumps, and similar installations.	100[3]
Drainage canal, ditch, or stream	50

[1]This distance can be reduced to thirty feet if the sewer is of cast iron with tight joints or Schedule 40 plastic pipe with water-tight joints.

[2]The minimum distance requirement is for wells in different aquifers and does not take into consideration the effects of the pumping from nearby wells in the same aquifer.

[3]May be reduced to fifty feet when the well is cased and the annular space between the casing and hole is sealed to a minimum depth of fifty feet.

Section 2.2.4.2. Levees

Wells shall be at least 250 feet from levees (R.S. 38:2251). Owners of wells placed upon levees fronting the Mississippi River or upon any levee or levees fronting any lake or canal or waterway subject to the control or surveillance of a district, board, or police juries or municipal corporation, are subject to court action (R.S. 38:225).

Section 2.2.4.3. Flood Water

Locations subject to flooding should be avoided if possible. If a reasonable alternate site does not exist, the well may be constructed in flood-prone areas provided the top of the casing is at least two feet above the highest probable flood level for ten years, but not less

than two feet above ground surface. Flood information can be obtained from the U.S. Geological Survey and/or the Louisiana Department of Public Works. The annular space between the casing and hole should be filled with cement slurry to a depth of not less than fifty feet. The well should also be designed to be waterproof in order to prevent flood waters from entering the well and the annular space.

Section 2.2.4.4. Relation to Buildings

A well used to supply a public water system shall not be located below ground surface, such as in pits and basements, unless adequate drainage is provided to prevent flooding and the location is approved by the Louisiana Health and Human Resources Administration, Division of Health.

When a well other than one used to provide water for a public water system is in the basement of a building or in a pit or room of a building, which is below ground surface and is not properly drained, the top of the casing should extend at least two feet above the floor. A cover, seal, or a waterproof adapter shall be used to prevent seepage of water into the annular space and well regardless of use.

Section 2.2.5.0 Well Vent
(Sometimes called a Breather Pipe)

Well vents shall be provided on public supply wells and should be so constructed and installed as to prevent the entrance of contamination. All vent openings should be piped watertight to a point not less than twenty-four inches above ground surface and above the highest probable flood level, and in any event not less than one foot above the top of the well casing. Such vent openings and extensions thereof should not be less than one-half inch in diameter, with extension pipe firmly attached thereto. The openings of the vent pipes should be turned downward and screened to prevent the entrance of insects and foreign matter.

Section 2.2.6.0. Ground Slab

When "hard surface" ground slabs (e.g. concrete) are placed around the well at ground surface, it shall extend at least two and one-half feet from the well in all directions with a minimum thickness of not less than four inches. The surface of the slab shall be sloped to drain away from the well. The top of the casing shall be at least six inches above the top of the slab. Where a slab is not provided, the ground surface surrounding the well shall be compacted and graded to drain water away from the well.

If a slab is installed, the annular space shall be filled to a depth of not less than fifty feet with cement slurry. The placement of a slab shall not be considered a substitute for the placement of fill or cement in the annular space between the hole and casing.

Section 2.2.7.0. Disinfection of Wells

All new wells and existing wells on which repair work have been done, if used to supply public water systems, shall be disinfected before being put into use, in accordance with Chapter 8 of the State of Louisiana Sanitary Code.

Section 2.2.8.0. Drilling Site

Before and during drilling and constructing operations, materials, tools, and drilling equipment shall be maintained to minimize contamination. After drilling and constructing operations are completed the contractor shall use all measures necessary to minimize all health and safety hazards, and to prevent movement of water and other foreign material into the drilled hole or well. Following are specific recommendations regarding safety and health hazards.

A. The mud pit shall be constructed and maintained so as to minimize contamination of the drilling mud.
B. If used, an approved portable toilet facility should be located at least twenty-five feet from the hole being drilled.
C. During drilling and construction and prior to the installation of permanent pumping equipment or during a temporary shutdown for more than twenty-four hours, safeguards shall be taken to prevent possible contamination and damage. The well shall be covered or capped to prevent entry by other than the contractor. The well shall be clearly marked and not become a safety hazard.

Section 2.3.0.0. Drilling

Geologic conditions in Louisiana permit the use of two methods of drilling–the rotary method and reverse circulation method. Regardless of the method used, every precaution should be taken during drilling operations such as the installation of surface casing where needed to prevent contamination. Water used in drilling operations should be free, as much as possible, of foreign material and contaminants.

Rotary drilling depends upon proper functioning of the circulating system that requires control of the volume, pressure, and the drilling fluid (mud). The

properties of the drilling fluid (a mixture of water and "drilling mud") must be satisfactory to:

1. Carry all cuttings from the bottom of the drilled hole,
2. Absorb heat generated by friction,
3. Prevent caving, bridging, or loss of circulation,
4. Prevent the interchange of water between aquifers,
5. Prevent the settling of cuttings to the bottom of the hole during interruptions in drilling, and,
6. Prevent caving or bridging in order that a geophysical log, if specified, may be made for the full depth of the hole.

During the drilling of a hole that is to be cased the contractor should:

1. Record the hole diameter and any changes in size of hole,
2. Record (driller's log) the formations penetrated,
3. Record any unusual occurrences, such as loss of circulation, cave-ins, etc., and,
4. From each potential aquifer collect representative samples (drill cuttings) for use in determining screen slot openings of the formation(s) to be screened.

Section 2.3.1.0. Alignment

It is important that holes be drilled vertically and straight to:

1. Avoid encroachment on neighboring property,
2. Prevent intersection with other wells and holes,
3. Prevent damage to screen while being set,
4. Prevent damage to pumping equipment, and,
5. Allow for lowering the pump to the desired depth.

The water well contractor shall exercise reasonable care to assure that the hole and well is reasonably straight and plumb. Tests for plumbness and alignment are described in journals and manufacturers' pamphlets. One such test is described in Section 1-6 in the American Water Works Association Standards for Deep Wells (revised 1966).

Section 2.3.2.0. Test Holes

After all available data and reports are evaluated, it may be advisable to drill one or more test holes to obtain and verify information needed for locating, drilling, selecting, and setting casing and screen in a well, and determining the pump, type, and size. Usually a test hole is drilled to the base of fresh water or to the bottom of the sand to be tested. Test holes are drilled primarily to:

1. Determine the exact depth and thickness of the fresh water bearing sands (aquifer),
2. To collect drill cuttings for determining slot openings and the best location for the screen, and,
3. To collect quality and quantity of water data that can be used to design the well and select a pump and motor.

During drilling an accurate driller's log should be maintained by the contractor. In addition to recording the material encountered and depths, the log should also include a record of any unusual occurrences, such as loss of circulation, caving, zones where drilling was difficult, etc. A copy of the driller's log shall be available for use immediately after drilling operations are completed, and available for inspection during drilling.

It is recommended that drill cuttings be collected, for the entire depth of the test hole, bagged and labelled. At the minimum, samples of all potential production sands or as otherwise specified in the contract should be collected. Sand samples should be collected at intervals of not greater than twenty feet and preferably at ten-foot intervals. The contractor shall perform the necessary work, such as circulating at a given depth, and provide the necessary tools and equipment, to assure that representative formation samples are collected.

After the hole is drilled to the desired depth, a geophysical log, preferably an electrical or induction log, should be made for the full depth of the drilled hole to obtain information on the occurrence of the sands and fresh water. A number of commercial companies make electrical or induction logs, which record the electrical properties (spontaneous potential and resistivity) of the beds penetrated and the contained fluid. An induction log with spontaneous potential, resistivity, conductivity, and induction curves is satisfactory. For satisfactory interpretation in fresh water zones the conductivity curve scale should not be greater than two hundred millimhos/m per track.

Section 2.3.2.1. Testing

Casing and a short length of screen may be set temporarily to collect water samples and hydrologic data. During such operations the water well contractor

shall exercise every precaution to prevent contamination of the water sample by movement of water from other sands into the screen and by drilling mud. A relatively water-tight packer shall be set above the top of the screen. Many industrial and "home-made" packers are successfully used in Louisiana and the contractor shall provide details on the type of packer to be used prior to the start of drilling.

If the drilled hole is deeper than the interval to be tested, a cement plug shall be set from the bottom of the drilled hole up to a depth within twenty feet of the bottom of the proposed screen setting or to the top of clay or shale underlying the sand to be tested. A sufficient period shall be allotted for the cement to set before development begins. If no saline water sands were penetrated and casing and screen are to be set in the hole to make a production well, a highly viscous drilling mud (or a permeability of less than 0.01 millidarcies) may be used in place of cement slurry as a plug in the bottom of the hole.

During development of test wells, acceptable methods should be employed to remove fine materials and mud from around the screen, to collapse the sand to prevent contamination, and to assure that the water sample is from the aquifer and interval screened. During the testing (not development) period, provisions shall be made to measure the static water level, the pumping water level, and the yield as often as specified to assure that the necessary data are collected to calculate as accurately as possible, the aquifer's hydraulic characteristics and the well's specific capacity. Water samples should be collected periodically and analyses made to determine selected chemical properties such as pH, iron, and chloride content. When the quality of water has stabilized, using as indicators all or some or all of the previously mentioned chemical properties, and the water's temperature, and any other chemical and physical properties, over a sufficient period of time, the water sample should be representative of that in the tested interval. After stabilization, two water samples should be collected, at least one hour apart, for complete analyses.

The duration of the test period should be long enough to assure that the water sample collected is free of any foreign matter and fluids and is native to the formation and depth interval tested. Unless specified otherwise by the owner, airlift should not be used to collect water samples.

When the specified testing is satisfactorily completed, the casing and screen shall be removed from the hole. If the same "packer" is used to test another sand, it should be examined to assure that it is water-tight and will prevent the movement of fluid from one aquifer to another. If another aquifer, usually at a shallower depth, is tested, the contractor should set a cement plug from the top of the plug already set in the bottom of the hole to a depth within twenty feet of the depth where the bottom of the test screen is to be set, or to the top of the clay or shale underlying the sand to be tested.

Abandoned test holes and test wells are to be plugged and sealed in accordance with Louisiana Department of Public Works' rules, regulations, standards, and methods for plugging and sealing abandoned water wells.

Section 2.4.0.0. Casing

Section 2.4.1.0. General Criteria

The selection of casing is dependent upon a number of factors that should be considered when designing a well and installing casing. Following are some of the factors:

1. The casing should be strong enough to resist the forces imposed during installation, and other forces that can be expected after installation,
2. The casing should be of adequate diameter to accommodate the pump, and convey the required quantity of water,
3. Joints for casing should have threaded couplings, or be welded to insure water-tightness for the entire length of casing,
4. The casing shall be plumb and straight. The plumbness and alignment of the casing to the proper depth of the pump setting and future anticipated pump settings during the life of the well shall be checked in accordance with accepted practices and/or as specified, and
5. The casing shall be installed so as to seal off waterbearing formations that contain undesirable water and to prevent water from the surface and other aquifers from entering the well.

Section 2.4.2.0. Materials

A drilled hole is cased with various material to prevent the wall of the hole from collapsing, to house the pump, and to convey the water to the surface. The materials commonly used in Louisiana are metal and plastic, and in some rare instances, concrete has been used.

Section 2.4.2.1. Metal

Steel is the material most frequently used for well

casing in drilled wells. The three principal classifications of steel used for water well casing are: standard and line pipe, structural steel, and high strength carbon steel.

A. Standard and line pipe. This material should meet one of the following standard specifications, including the latest revision thereof:

(1) API Std. 5L, "Specification for Line Pipe."

(2) API Std. 5 LX, "Specification for High-Test Line Pipe."

(3) ASTM A53, "Standard Specification for Welded and Seamless Steel Pipe."

(4) ASTM A120, "Tentative Specifications for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses."

(5) ASTM A134, "Standard Specifications for Electric-Fusion (Arc)–Welded Steel Plate Pipe (sizes 16 inches and over)."

(6) ASTM A 135, "Tentative Specifications for Electric-Reisistance-Welded Steel Pipe."

(7) ASTM A139, "Standard Specifications for Electric-Fusion (Arc)–Welded Steel Pipe (sizes 4 inches and over)."

(8) ASTM A211, "Standard Specifications for Spiral-Welded Steel or Iron Pipe."

(9) AWWA C201, "AWWA Standard for Fabricated Electrically Welded Steel Pipe."

(10) AWWA C202, "Tentative Standard for Mill Type Steel Water Pipe."

(11) Underwriters Laboratories Standard 888.

B. Structural Steel. This material shall meet one of the following specifications of the American Society for Testing and Material, including the latest revision thereof:

(1) ASTM A36, "Tentative Specification for Structural Steel."

(2) ASTM A242, "Tentative Specification for High Strength Low Alloy Structural Steel."

(3) ASTM A245, "Standard Specification for Flat-Rolled Carbon Steel Sheets of Structural Quality."

(4) ASTM A283, "Standard Specifications for Low and Intermediate Tensile Strength Carbon Steel Plates of Structural Quality (Plate 2 inches and under in thickness)."

(5) ASTM A440, "Tentative Specification for High-Strength Structural Steel."

(6) ASTM A441, "Tentative Specification for High-Strength Low Alloy Structural Manganese Vanadium Steel."

Abbreviations used are: API–American Petroleum Institute; ASTM–American Society for Testing and Material; AWWA–American Water Works Association.

C. High strength carbon steel. At present there is no standard specification concerning this material. However, products are marketed whose chemical and physical properties are similar. The material should contain mill marking which will identify the manufacturer and specify that the material is well casing steel that complies with the chemical and physical properties as published by the manufacturer.

D. Copper pipe. Seamless copper pipe is listed by manufacturers for diameters up to 8 inches. Data for such pipe and larger sizes should be obtained from the manufacturers or jobbers.

E. Other material. Casings of stainless steel, are suitable and are often used for the full depth of the well if not prohibitive in cost. Concrete, wood, epoxy and fiberglass casings and screens have been used in some rare instances.

Section 2.4.2.2. Plastic Pipe

The following instructions quoted from the Louisiana Health and Human Resources Administration, Division of Health letter dated January 13, 1969, shall be used when considering the use of plastic pipe for water well casing:

1. Plastic casings shall not be used in water wells

greater than 300 feet in total depth and in casing diameters greater than 8 inches.

2. The pipe shall be of the polyvinyl chloride (PVC) type and shall comply with either Commercial Standard CS 256-63, Type I, Grade 1 (designated as PVC 1120), or Type 1, Grade 2 (designated as PVC 1220); or Commercial Standard CS 207-60. The pipe shall be marked in accordance with the Standards.

3. Casing wall thicknesses shall not be less than the equivalent of Schedule 40 in any case. Where threaded joints are used, wall thicknesses shall not be less than the equivalent of Schedule 80.

4. Joints shall be of the solvent-weld tapered bell and spigot type meeting ASTM Specification D-2672-68, or screwed-and-glued where threaded joints are used. Adequate curing time must be allowed for the solvent-weld joints before lowering the casing into the drill hole. The manufacturer's recommendation in this regard should be followed.

5. It must be realized that plastic pipe will not take the abuse during well construction as will conventionally used ferrous materials. Care therefore must be exercised during construction to avoid damaging the casing.

6. Under no circumstances can the weight of the pump and its related piping, well head, and motor be allowed to be supported by the well casing. The casing head seal must be of a type which will not permit significant transmission of the weight from the pump, etc., to the casing in the event of settlement. As an example, compression rubber rings seals would be satisfactory whereas flange and gasket systems would not.

Section 2.4.3.0. Height of Casing

Well casing should project at least one foot above ground level, building floors, or top of slabs, except for wells in areas subject to flooding, or in basements (Sections 2.2.4.3. and 2.2.4.4.). The ground surface should slope away from the well in all directions to prevent seepage of water into the well and annular space.

Section 2.4.4.0. Seals or Packer

Many wells are constructed with different sizes of casing with the smaller size casing extending into the larger casing for distance of about forty feet. This type of construction is referred to as a "telescoping well". A swage reducer, a packer, or a seal is used to connect casing of one size to another in order to prevent the movement of water from one aquifer to another. Cement slurry carefully placed in the annular space between the casing pipe of different sizes has been used successfully as a "connector". In areas where there is a possibility, because of head differential, that water of unacceptable quality in an aquifer could move into another aquifer, the use of a swage reducer or cement as a seal is preferred. Regardless, whether a seal, packer, cement, or reducer is used, the connection between the pipes must be watertight and subject to long term wear. The water well contractor, when accepting or bidding on a job, should present details on how he plans to "connect" the casings.

Some contractors fabricate and use "packers" or "seals". Many of these "homemade" seals or packers are acceptable but should be approved by the well owner or engineer prior to use.

Seals between the pump column and casing are used in some irrigation wells to reduce the possibility of oxidation of the casing and the loss of suction. The Louisiana Health and Human Resources Administration, Division of Health does not permit the use of this type of installation in wells that supply public water systems.

Section 2.5.0.0. Screen

When selecting and installing a screen the following design factors that influence the efficient performance and life of a well must be considered: type of screen required, screen material, slot openings, entrance velocity, screen length and setting, and whether or not gravel packing is necessary.

Section 2.5.1.0. Type of Screen

Several types of screen construction are used successfully in Louisiana, such as, louver or shutter types, wire-wrapped or pipe base, and the continuous-slot or rod base type. The type of screen used is governed by cost, the contractor's experience with handling a specific type of screen, water quality, length of screen required, proposed well yield, and the required structural strength of the screen. The structural strength is a function of the type of material used and the type of construction. The screen selected should be strong enough to withstand external pressures and the vertical load due to the weight of drill stem used to set the screen and the casing above the screen, if set in one continuous string.

Section 2.5.2.0. Screen Material

The type of screen material is generally dependent upon cost, and the quality of water to be pumped. If the water containes a relatively high concentration of carbon dioxide, dissolved solids, or hydrogen sulfide, corrosion-resistant alloys should be used in the construction of the screen. The screen should, if economically feasible, be made entirely of the same alloy and the overlap or extension pipe (for not less than five feet) above the screen, shall be made of the same alloy as the screen. The likelihood of corrosion can also be decreased by maintaining the entrance velocity within acceptable limits–0.1 foot per second or less (See Section 2.5.4.0.).

Among metal alloys available with varying degrees of corrosion resistance are the stainless steels which combine nickel and chromium with steel and also the various copper-based alloys, such as brass and bronze which combine traces of silicon, zinc, and manganese with copper. Manufacturers can be expected to provide advice on the type of metal or metal alloys to be used, if supplied with the results of water analyses. Non-metal screens made of polyvinyl chloride (plastic) pipe and fiberglass screens have been used as an alternative when corrosive conditions exist.

In contrast to "corrosive waters," encrusting waters are usually alkaline, have excessive carbonate hardness, and contain iron and/or manganese. Encrustation, or incrustation, which reduces the open area of the screen and the specific capacity of the well, is the deposition of undesirable material about the screen openings. Efficient well development, which will decrease excessive head losses or pressure differentials across the face of the screen, will minimize the precipitation of encrusting minerals.

Section 2.5.3.0. Slot Openings

The selection of the openings, which shall be based on the results of mechanical analyses of the formation samples collected during drilling, is dependent upon the percentage of formation material that will be allowed to pass through the openings. Generally the percentage of material that will be permitted to pass through the screen's openings, is related to the intended use of the water. Although proper screen selection and well development should eliminate the pumping of sand during normal operations, cyclic pumping, and increased pumping rates sometimes causes a well to yield some sand. Sand pumping by wells used to supply public water systems cannot be tolerated whereas some sand in water used for irrigation generally is acceptable. Other factors involved in the selection of the slot openings are the uniformity of the material, the uniformity coefficient, the type of overlying sediments, and the desired entrance velocity (See Section 2.5.4.0.).

Section 2.5.4.0. Entrance Velocity

To reduce the potential for incrustation and "sanding", the entrance velocity should not exceed 0.1 foot per second. The entrance velocity is calculated by dividing the yield expressed in cubic feet per second (gallons per minute divided by 448.8 equals cubic feet per second) by the total area of the screen openings in square feet. The total area of the screen openings is the area of the openings provided per foot of screen multiplied by the length of screen in feet. Most manufacturers provide tables listing the open area for screen diameter and slot openings.

Section 2.5.5.0. Screen Length

The length of the screen is influenced by cost, aquifer thickness, desires well yield, and the estimated pumping level. The screen length should represent a compromise between cost and well efficiency. But economy should not be such an overriding factor in the owner's mind that the length and diameter of the screen selected will not adversely affect the well yield that barely meets the owner's needs. Well yield is more effectively increased by increasing the length of the screen than by proportionally increasing the diameter.

Section 2.5.6.0. Screen Setting

Installation of the screen should be based upon an evaluation of all data collected during drilling, and a detailed interpretation of the driller's and geophysical logs, if available. Care should be exercised to avoid damaging any part of the screen, and to assure that the setting is correct. Following are some factors that should be considered when setting the screen:

A. Cascading Water. The screen should not be set above the expected pumping level in the well because the water entering the well will then cascade and will pick up oxygen. The condition will increase corrosion and possibly cause cavitation in the pump. The entrained oxygen will likely cause pumping problems and the resultant corrosion will reduce the life of the well.

B. Coarse Material. If the quality of the water and costs permit, the screen should be set opposite the coarser material in the aquifer. If the entire interval of coarse material is inadequate to provide the desired yield, the screen must be extended the needed distance and be

placed opposit the finer sand for a short distance.

C. Extension Pipe. The extension pipe, or overlap pipe, that is immediately above the screen, should be of the same material as the screen for at least five feet to retard electrolytic corrosion of the screen. (Section 2.5.2.0.) Additional pipe extension could be of the same material as the well casing.

D. Blank Pipe. When a screen is set with blank sections, its installation is difficult and should be done carefully to assure that the setting is correct. The blank pipe should be of the same material as the screen.

E. Seals and Packers. If the extension pipe above the screen is to be "swaged" to the well casing, a water-tight seal or packer should be used. The usual procedure is to lower the screen to its final setting and swage the packer or set it in accordance to acceptable standards. If a reducer is used to connect the extension or overlap pipe to the well casing the connection should be water tight. Refer to Section 2.4.4.0. for additional discussion on seals and packers.

F. Muddy Water. The setting of screen openings incorrectly opposite clays may result in the collapsing of the clays during development, and the pumping of muddy water.

Section 2.5.7.0. Gravel Pack

If the interval to be screened consist of a fine uniform sand or consists of thin alternating layers of fine, medium, and coarse sand, it may be desirable to gravel pack. The objectives of gravel packing is to increase the permeability of the material in the zone immediately surrounding the screen to minimize the chances of sand pumping, to reduce the entrance velocity of the face of the screen, to reduce the chances of error where a screen is set opposite alternating beds of sand of different grain size and of clay, and to allow the installation of a small diameter screen in relatively thick aquifers.

The selection of the gravel pack material and of the method to be used to gravel pack generally vary by geohydrologic conditions, proposed use of well, and the predominate grain size of the material in the aquifer. Regardless of the criteria used, the specifications for the screen and gravel pack should be based upon an evaluation of the sieve analysis of the sands comprising the aquifer and of the gravel pack material. The uniformity coefficient (See Glossary of Terms) of the selected gravel pack material should be 2.5 or less.

Gravel envelopes are usually three to eight inches thick. Some designers recommend a minimum pack thickness of six inches. The envelope should consist of clean well-rounded silicious material that will permit the selection of screen openings that will retain about ninety percent or more of the gravel pack material. Limestone and shale shall not be used as a gravel pack.

Section 2.5.8.0. Formation Stabilization

If the hole drilled to accommodate the screen is much larger (four inches or more) than the diameter of the well screen it is sometimes necessary to fill the annular space around the screen and the extension pipe with a fill material such as sand or gravel, to prevent caving or slumping of silt, sand, and clay from above the aquifer. To allow for settlement and loss of material through the screen during development, the annular space around the screen and casing should be filled to a level of about thirty feet or more above the top of the screen. The introduction of such material will greatly assist in completing a well by natural development. The size of the screen openings should be selected to permit development of the aquifer material around the screen, as if no formation stabilizing material were used. Formation stabilization should not be confused with gravel packing. In contrast to gravel packing, the material used as the formation stabilizer is not specially graded. Material of about the same grading as that in the formation, or slightly coarser, is satisfactory. Commercially available equipment such as shale packers or metal pedal baskets, are commonly used to prevent sloughing or caving into the producing formation.

Section 2.6.0.0. Cementing or Grouting

Chapter 8 of the Sanitary Code of Louisiana requires that the annular space between the outer casing and bore hole shall be tightly filled with a cement slurry or impervious clay (permeability less than 0.01 millidarcies). See Sections 2.6.2.0. for details regarding the use of cement or other materials for grouting. The method and material employed depends upon (1) the reason for grouting or sealing, (2) the type of well construction, (3) the use of water from the well, and (4) local geohydrologic conditions. The primary reasons for "grouting" are:

1. To protect the water supply from surface contamination,
2. To increase the life of the well by protecting

the casing against exterior corrosion, and,

3. To prevent movement of water of an unsatisfactory quality from one aquifer to another.

Section 2.6.1.0. Public Water Systems

The annular space between the casing and drilled hole for wells used to supply public water systems should be filled with cement slurry from the bottom of the casing up to the ground surface in one continuous operation and under pressure, or under certain conditions with a tremie pipe or by gravity to a specified depth.

If the casing is connected to the screen by a metal reducer and the screen and casing are set in "one continuous string", cementing under pressure for the bottom up is not usually possible. When such a well is installed and not gravel packed, cement slurry shall be placed with a tremie pipe from near the top of the screen to ground surface. If conductor casing is used, it must be set and cemented to a depth of not less than fifty feet or to the top of the screen, whichever is shallowest. The remainder of the annular space between the well casing and the drilled hole and below the bottom of conductor casing shall be filled with cement slurry using a tremie pipe. The annular space between the casings shall be filled with cement slurry or highly viscous mud.

When a "one-continuous-string well" is gravel packed, the top of the gravel pack should be not shallower than a depth of fifty feet below ground surface, except if the well construction and screen setting require that the top of the gravel be at a depth shallower than fifty feet. Regardless, cement slurry shall be placed in the annular space between the well casing and the hole from the top of the gravel pack to ground surface using a tremie pipe. If conductor casing is used, it must be set and cemented to a depth of not less than fifty feet or to just below the top of the gravel pack, whichever is shallowest. If the top of the gravel pack is below a depth of fifty feet the remainder of the annular space below the conductor casing to the top of the gravel pack shall be filled with cement slurry using a tremie pipe. The annular space between the well casing and conductor casing shall be filled with cement slurry or highly viscous mud. The water well contractor should exercise all precautions to assure that the gravel pack is not placed opposite formations containing undesirable water. If a "gravel-fill" pipe is installed for periodically replenshing the gravel, it shall be cemented in place to prevent the possibility of the gravel pack being contaminated by surface seepage. The pipe shall be capped in such a manner to prevent easy entry by parties other than the owner.

Any variations or exceptions for public-supply wells must be approved prior to drilling by the Louisiana Health and Human Resources Administration, Division of Health.

2.6.2.0. Wells Used for Other than Public Water Systems

In areas where the only possible contamination is from the surface, cement slurry or highly viscous clay (permaeability less than 0.01 millidarcies) shall be placed in the annular space between the casing and the hole to a depth of not less than fifty feet. This may be done with a tremie pipe or by gravity.

In areas where saline-water-bearing sands are present between ground surface and the screen, the annular space between the casing and the drilled hole shall be filled with cement slurry from the bottom of the casing up to the ground surface in one continuous operation. Before placing the cement slurry, water, or drilling fluid should be pumped through the casing and up the annular space to clear it of any obstructions. If the well is a "one-continuous-string well" cement slurry shall be placed in the annular space with a tremie pipe from the top of the gravel pack or if not gravel packed, from near the top of the screen to ground surface. If conductor casing is set the applicable procedures in Section 2.6.1.0. shall be used to cement and grout the well.

Section 2.7.0.0. Well Development

Section 2.7.1.0. Purpose

When the casing and screen are installed, the well is only partially completed. The next and equally important phase of well construction is well development, which shall be done using acceptable methods that will not damage the well or cause adverse subsurface conditions. Well development should generally be continued until the water from the well is "sand free" and the well will produce the required quantity of water, with a drawdown in the well nearly the same as that in the aquifer. The principal purposes of well development are:

1. To remove silt, sand, drilling mud, and other materials that may retard the flow of water toward and into the well,
2. To correct any damages to, or clogging of, the water-bearing formation that may have occurred during drilling, and,
3. To stabilize the material around the screen so that the well will yield water "free of sand".

Section 2.7.2.0. Methods of Development

The exact method or methods to be used for development depend upon a number of factors such as the screen openings, the material in the formation, the diameter of the well, the experience of the water well contractor, and the equipment available for development. The following methods used in developing, redeveloping, or conditioning a well are acceptable:

1. Surging with a plunger or air.
2. Jetting with water also known as cross-washing.
3. Backwashing or surging by alternately starting and stopping the pump.
4. Using chemicals designed for developing or redeveloping a well.
5. Overpumping.

The use of explosives is not recommended. If used, extreme care and caution must be exercised and approval of the appropriate Federal and State agencies must be obtained prior to use. Water used for development should be free, as practicable as possible, of contaminants. Only potable water shall be used in the development of public supply wells.

Section 2.7.3.0. Criteria for Development

The statements, "the well is developed" and "sand-free water" should be based upon a uniform and scientific set of standards that is equally acceptable to the well owner and the contractor. Well construction and development rely upon good judgment based on experience and knowledge of the area. In addition, consideration must be given to a number of principles related to a well development that will aid in making an efficient well and increase the life of the well.

Sometimes the specifications for a well require that the well must have a certain efficiency. The theoretical hydraulic efficiency of a well is defined as the observed specific capacity for a given yield and a given period of pumping divided by the theoretical specific capacity determined for the same yield and period of pumping. A well is considered one hundred percent efficient when the observed specific capacity divided by the corrected theoretical specific capacity equals one. Under this condition the drawdown in the well is similar to the drawdown in the aquifer. Because the theoretical efficiency is based on ideal conditions and because many unknown geohydrologic factors may effect the well yield, a one hundred percent efficient well is not always obtainable. Depending upon the aquifer's thickness in relation to the screen length and well diameter, wells with an uncorrected efficiency of fifty to eighty percent are usually satisfactorily developed. The higher efficiency is for relatively "thin" aquifers. Prior to drilling the well owner or engineer should establish an acceptable practicable well efficiency and include that value in the specifications.

The use of specific capacity to measure well development requires knowing or being able to estimate, at the minimu, the aquifer's capability to transmit water (transmissibility). Then theoretical specific capacity of a well can be approximated or calculated. If the transmissibility, in gallons per day per foot, can be estimated, the theoretical specific capacity can be approximated by dividing transmissibility by 2000.

If the coefficients of transmissibility and storage are known or can be estimated the specific capacity can be obtained from the curves, Estimating Specific Capacity in Appendix III. The theoretical specific capacity approximated by these two methods should be corrected for partial penetration and pipe friction losses.

Oftentimes the capabilities of an aquifer to store and transmit water are unknown. Under these circumstances the contractor's experience is the most useful "tool" for determining when a well is satisfactorily developed. The owner and contractor should agree that the well will be developed and pumped, at a specified yield until the water is substantially "free from sand" and free of drilling fluid and mud.

The acceptance of a well as "sand free" by sight or on the basis of the amount of sand per volume of water is controversial and is debatable. For example, the recommended ratios for "sand free" water range from about one ounce of sand per eight thousand gallons (about 1.0 milligrams per litre) of water to one ounce per one hundred gallons (about 80.0 milligrams per litre) of water. Because of the possibility of damage by sand to plumbing fixtures and industrial equipment and products, the tolerance for sand in water used for public water systems and most industrial purposes is low and may be less than the lowest recommended ratio, which is one ounce per eight thousand gallons. Many wells that are used for public water systems have an acceptable ratio of "no sand". The well owner should specify the acceptable limits of "sand free" water with equal consideration given to the use of the water, the desired production rate, costs and well development.

A well should be developed at a yield of 1.5 times the proposed pumping rate, and until the observed specific capacity is the same or nearly the same as the theoretical specific capacity or practicable specific capac-

ity after several different periods of measuring the yield and drawdown. Adequately developed wells should be "sand free" and should not have encrustation problems if the operating pumping rate is about two-thirds the developed rate, the entrance velocity is 0.1 foot per second or less, and the head differential across the face of the screen is at a minimum.

Section 2.7.3.1. Gravel-Packed Wells

The successful development of gravel-packed wells is dependent upon the grading of the gravel, the method of development, and thickness of the skin of the relatively impervious drilling mud filter cake which is "plastered" on the wall of the hole and is between the water bearing formation and the artificially placed gravel. Because it concentrates energy in small areas, the jetting or cross washing method is usually most effective in developing gravel-packed wells.

Section 2.7.3.2. Chemicals

Several chemicals aid in the development process by reducing the gel-like properties of the drilling mud and by dispersing the clay particles that are on the sand grains. The polyphosphate chemicals are mainly used. Although sodium hexametaphosphate is the best known, tetra sodium pyro phosphate, sodium tripolyphosphate, and the sodium septaphosphate are also effectively used in well development. The appropriate mixture of chemicals to water in the well is usually specified by the manufacturer. The mixture should be allowed to stand in the well for at least one hour, or the period of time recommended by the manufacturer of the chemical, before development starts.

Glossary of Terms

(Number in parentheses is reference which is source of definition)

Abandoned Well: A well whose use has been permanently discontinued or which is in such a state of disrepair that it cannot be used to supply water or for observation purposes.

Active Well: An operating augered, dug, driven, bored, or drilled well used to supply water.

Aquifer (Ground Water Reservoir): An aquifer is a formation group of formations, or a part of a formation that contains sufficient saturated material to yield significant quantities of water to wells. (5)

Aquifer Test: Aquifer or pumping tests are made in water wells–(1) to obtain information about the performance and efficiency of the well being pumped and/or (2) to provide data from which the hydraulic characteristics of the aquifer can be calculated. The test made to determine hydraulic characteristics is usually referred to as "aquifer test."

Artesian (confined ground water): When the water level rises above the top of the aquifer which the well taps, the aquifer is assumed to be "artesian". An artesian well flows only when the water level is above land surface. (5)

Bacteriological Analysis: This analysis, usually for drinking water, generally consists of determining total coliform.

Biological Analysis: Biological analysis of ground water is made only when there is a possibility of contamination from a surface source and an examination for micro-organisms is needed.

Bridge Plug: A cement plug of not less than fifty feet in length set at the bottom of the hole or well or at any depth in the hole or well.

Casing: A tubular retaining structure, generally metal, which is installed in a drilled, bored, driven, or augered hole to maintain the well opening.

Cathodic Protection: An artificial electrical system constructed to redirect stray electrical currents that cause a specific type of corrosion in casing, transmission piping, and drill pipe. (1)

Cement Slurry: A mixture consisting of one bag of cement to five or seven gallons of water. Under certain conditions other materials may be added to the cement to accelerate or retard the time of setting and to provide extra bulk. If a gel or bentonite is used, the quantity added generally should not exceed about four percent.

Chemical Analysis: A chemical analysis is usually a report of dissolved minerals in the water and the water's physical properties, such as temperature and color. The minimum chemical properties that are usually determined are hardness, specific conductance, hydrogen-ion concentration (pH), dissolved solids, chloride, bicarbonate, iron, fluoride, and nitrate.

Concrete Grout: A mixture consisting of cement, sand gravel, and water in the proportion of one bag of

cement (ninety-four lbs.) to an equal volume dry sand and gravel and five to seven gallons of water.

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water. (6)

Contamination: Any introduction into water of microorganisms, chemicals, wastes, or waste-water in a concentration that makes the water unfit for its intended use. (4)

Department: The Louisiana Department of Public Works.

Director: The Director of the Department of Public Works of the State of Louisiana or his designated representative.

Disinfection: The killing of a large proportion of the microorganisms in or on a substance with the probability that all pathogenic bacteria will be killed.

Drawdown: Drawdown is the difference, usually in feet, between the static (non-pumping) water level and the pumping level in a well for a stated period of pumping from the well.

Drill Cuttings: Drill cuttings are samples of the material obtained during drillings and are the source of lithologic information needed for proper selection of screen openings. A principal objective of drilling test holes is to obtain samples (1)

Driller's Log: A driller's log is the driller's description of the geologic strata encountered, their thickness and depth. (1)

Drilling Mud: A fluid composed of water and clay (either native clay or in combination with commercial clays) used in drilling operations to remove cuttings from the hole, to clean and cool the bit, to reduce friction between the drill stem and the sides of the hole, and to seal the sides of the hole.

Electrical Log: A record of the resistivities of the subsurface formations and the contained fluid and the spontaneous potentials generated in the borehole, both plotted in terms of depth below some datum, such as land surface. Similar logs commonly made in boreholes are the induction logs. Other borehole geophysical logs that also may be available are the gamma ray, caliper, and neutron logs. Usually only an induction electrical log is available for oil and gas wells.

Geopressured Aquifer: A term used for an aquifer, especially in the Gulf Coast Area, in which the fluid pressure exceeds the normal hydrostatic pressure of 0.465 pounds per square inch per foot of depth. (2)

Geothermal: Pertaining to the internal heat of the earth.

Gravel-Packed Well: A well in which artifically selected gravel or coarse material is hydraulically placed in the area immediately surrounding the screen or slotted pipe used as a screen, to increase the effective diameter of the well.

Ground Water: Water percolating below the earth's surface.

Ground Water Mining: The process, deliberate or inadvertent, of extracting ground water from a source at a rate so in excess of the replenishment that the ground water declines persistently, threatening actual exhaustion of the supply. (2)

Health Hazard: Any condition that may create a danger to public health and well being.

Hydraulic Conductivity: Hydraulic condictivity, which replaces the term "field coefficient or permeability", is the volume of water that will move in unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow. (5)

Hydraulic Gradient: The hydraulic gradient is the change in head per unit distance in a given direction. (5)

Hydrocarbon: Any of the class of compounds consisting solely of carbon and hydrogen.

Inactive Well: A well which is not in operation, but can be used, with a minimum of effort, as an observation well or a production well.

Lessee: See definition for water well owner.

Native Clay: Consisting predominantly of clay minerals that are available at or near the work site.

Observation Well: A well used by the owner, or an appropriate engineering or research group in studies of the water resources of an area.

Permeability: A measure of the relative ease with which porous media can transmit a liquid under a potential gradient. Sands have a higher permeability than clays.

Person: Any natural person, corporation, association, partnership, receiver, tutor, curator, executor, administrator, fiduciary, or representative of any kind.

Pilot Hole: A hole primarily drilled or augered with the intent to install casing and produce water.

Plumbness: Plumbness refers to the variation with depth of the center line of the well from a vertical line drawn through the center of the well at the top of the casing. (3)

Pollution: A condition created by harmful or objectionable material in water. (4)

Potentiometric Surface: The potentiometric surface, which replaces the term "piezometric surface" is a surface which represents the static head in an aquifer with reference to a specified datum such as mean sea level. (5)

Potable Water: Water whose bacteriological, physical, and chemical properties make it suitable for human consumption.

Public Water System: A system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals. (6)

Puddled Clay: Clay or a mixture of clay and sand, kneaded or worked when wet to render it relatively impervious to water. (5)

Pumping Test: Pumping tests are made in water wells– (1) to obtain information about the performance and efficiency of the well being pumped, or (2) to provide data from which the hydraulic characteristics of the aquifer can be calculated. The test made to determine hydraulic characteristics is usually referred to as "aquifer test".

Pumping Water Level: Pumping water level is the water level in a well that is being pumped, and usually is expressed in feet, above or below a specific datum, usually land surface.

Registered Well: An inventoried well that has been assigned a local well number by the State and whose records are available.

Saline Water: Water with a dissolved solids content of 1,000 milligrams per litre or more.

Screen: A structural tubular retainer, usually metal, used to support the hole in unconsolidated material with openings which are selected on the basis of adopted standards and allows sand free water to flow freely into wells in ample quantities and with a minimum loss of head. In agricultural wells, slotted pipe is sometimes used as a screen.

Seepage: The appearance and disappearance of water into the ground surface–a type of water movement.

Specific Capacity: The specific capacity is the rate of discharge of water from a well divided by the drawdown of water level within the well for a specified period of continuous pumping of the well. It is usually expressed as "gallons per minute per foot of drawdown after (specified) hours of continuous pumping".

Standby Well: A well that is used in emergencies or occasionally as a replacement well for an active well.

Straightness: Straightness merely considers whether the center line is straight or otherwise. (3)

Static Water Level: Static water level is the water level in a well that is not being pumped, usually expressed in feet, above or below a specified datum, usually land surface.

Storage Coefficient: The storage coefficient is the volume of water an aquifer releases from or takes into storage per unit surface area per unit change in head. (5)

Subsidence: A local mass movement that involves principally the downward settling or sinking of the earth's surface with little or no horizontal motion. (2)

Surface Plug: A cement plug of not less than thirty feet in length, in wells or holes drilled deeper than thirty feet, and set at or below the top of the casing in the well.

Transmissivity: Transmissivity, which replaces the term "transmissibility", is the rate at which water is transmitted through a unit width of the aquifer under a unit hydraulic gradient. (5)

Underground Injection: The subsurface implacement of fluids by well injection. (6)

Uniformity Coefficient: The uniformity coefficient is

the number expressing the ratio of the forty percent size of the material to its ninety percent size. Size refers to the percentage retained on a given sieve.

Water Well Contractor: Any person, organization, or corporation who engages for compensation in the drilling, boring, construction of a water well. Does not include anyone who drills, bores, cores, or constructs a water well on his own property for his own use.

Water Well Owner: Individual, corporation, association, partnership, institution, or governmental agency who is either the legal owner of the property on which the well is located or is holding a long-term lease on the property.

Water Table (unconfined ground water): When the water level is below the top of the aquifer the wells tap, the aquifer is assumed to be "water table". (5)

Well Vent (Breather pipe): An outlet at the upper terminal of the well casing to allow equalization of air pressure in the well and the escape of toxic or inflammable gas.

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Director

RULES

Department of Revenue

(Editor's Note: The following rules were adopted on December 9, 1975, to become effective on December 20, 1975.)

Louisiana Income Tax Regulations

Article 47:116.1 Declarations of estimated income tax by individuals

A. Requirement. A declaration of estimated tax must be filed for the taxible year by every person subject to the Louisiana income tax if the balance of Louisiana tax due after deducting prepayments and direct credits against the tax can reasonably be expected to exceed $200. In the case of married individuals, whether separate or joint returns are filed, the determination should be made with respect to each spouse, taking into account each's share of community income. The credits to be taken into consideration in calculating the balance of tax due are:

(a) prepayments by withholding tax on wages;
(b) prepayments created by crediting an overpayment from a prior year to the current year's liability;
(c) credit for taxes paid to another state allowable under R.S. 47:33;
(d) credit against the tax for certain disabilities allowable under R.S. 47:297A, and
(e) credit against the tax for percentage depletion allowable under R.S. 47:297B.

B. Declarations made by agents. The declaration may be made by an agent if the taxpayer is unable to make it himself.

Article 47:116.2. Joint declaration by husband and wife

A. General. Husband and wife may make a joint declaration of estimated tax even though they are not living together. However, a joint declaration may not be made if they are separated under a decree of divorce or of separate maintenance. A joint declaration may not be made if the taxpayer's spouse has a different taxable year. If the balance of tax due by both spouses exceeds $400, either a joint declaration may be made or a separate declaration may be made by each. If the balance of tax due by both spouses does not exceed $400, no declaration is required. If a joint declaration is made by husband and wife, liability for the estimated tax shall be joint and several.