PART 7

LICENSING OF ATOMIC ENERGY FACILITIES

TABLE OF CONTENTS

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PART 7

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I. GENERAL PROVISIONS

Section 1. Statement of Purpose - The regulations in this Part are issued by the Philippine Atomic Energy Commission, pursuant to Republic Act No. 5207, otherwise known as the "Atomic Energy Regulatory and Liability Act of 1968", as amended[1] to provide for the licensing of atomic energy facilities.

In the issuance of this Part, the Commission takes into consideration existing laws which declare that as a matter of national policy, the production and use of atomic energy facilities and materials are subject to the control by the State; that the development of nuclear fuel resources shall be the responsibility of the Government and that the ultimate objective of the State is the nationalization of all power generating facilities supplying the national grid. Furthermore, in accordance with Section 5 of the Act, the Commission, in the implementation of the regulations in this Part, shall impose reasonable requirements as are determined to be consistent with the Commission's statutory obligations of protecting the health and safety of the public and of promoting the national interest in the peaceful uses of atomic energy. (Rep. Act No. 5207; P.D. No. 1206; Rep. Act No. 6395; P.D. No. 40)

Section 2. Definitions - As used in this Part:

(a) **"Act"** means Republic Act No. 5207, including any amendments thereto;

(b) **"Commission"** means the Philippine Atomic Energy Commission;

(c) **"National interest"** means the national interest of the Republic of the Philippines, as provided in Section 2 of the Act;

(d) **"Code"** means the Code of PAEC Regulations;

(e) **"Atomic energy"** means all forms of energy released in the course of nuclear fission or nuclear transformation;

(f) **"Atomic energy facility"** means any equipment or device which the Commission may determine from time to time, by regulation. to be capable of producing or utilizing atomic energy material in such quantity or in such manner as to be of significance to the national interest or to the health and safety of the public;

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[1] Re-issued pursuant to PAEC Administrative Order No. I, Series of 1981, entitled "Establishing the Code of PAEC Regulations". This Part 7 of the Code supercedes the "Regulations for the Licensing of Atomic Energy Facilities" published in Vol. 70, No. 22, Official Gazette, 3 June 1974.

(g) **"Production facility"** means -

(1) Any nuclear reactor designed or used primarily for the formation of plutonium-239 or uranium-233; or

(2) Any facility designed or used for the separation of the isotopes of uranium or the isotopes of plutonium, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(3) Any facility designed or used for the processing of irradiated materials containing special fissionable material; except –

(i) laboratory scale facilities designed or used for experimental or analytical purposes; and

(ii) facilities in which the only special fissionable materials contained in the irradiated material to be processed are uranium enriched in the isotope uranium-235 and plutonium-239 produced by irradiation, if the material processed contains not more than 10^{-6} grams of plutonium-239 per gram of uranium-235 and has fission products activity not in excess of 0.25 millicuries of fission products per gram of uranium-235.

(h) **"Utilization facility"** means any nuclear reactor other than one designed or used primarily for the formation of plutonium-239 or uranium-233;

(i) **"Source material"** means uranium containing the mixture of isotopes occurring in nature. Uranium depleted in the isotope-235: thorium: any of the foregoing in the form of metal, alloy, chemical compound or concentrate and other material containing one or more of the foregoing in such concentration as the Commission may from time to time determine;

(j) **"Special fissionable material"** means:

(1) plutonium, uranium-233, uranium enriched in the isotope-233 or in the isotope-235, and such other fissionable material as the Commission, shall from time to time determine; or

(2) any material artificially enriched by any of the foregoing. The term "special fissionable material" does not include source material;

(k) **"Nuclear fuel"** means any material which is capable of producing energy by a self-sustaining chain process of nuclear fission;

(l) **"Nuclear reactor"** means any structure containing nuclear fuel in such an arrangement that a self-sustaining chain process of nuclear fission can occur therein;

(m) **"Nuclear installation"** means:

(1) any nuclear reactor other than one with which a means of sea or air transport is equipped for use as a source of power whether for propulsion or for any other purposes;

(2) any factory using nuclear fuel for the production of nuclear material or any factory for the processing of nuclear materials, including any factory for the reprocessing of irradiated nuclear fuel; and

(3) any facility where nuclear material is stored, other than storage incidental to the carriage of such material.

(n) **"Installation operator"** means the person licensed by the Commission as the operator of that installation. If no person is licensed by the Commission as the operator of the installation and the installation is operated by or for the Commission, "installation operator" shall be deemed to mean the Commission;

(o) **"Government agency"** means any ministry, commission board, bureau, office, authority, administration, government-owned corporation, or other establishment in the executive branch of the government;

(p) Controls when used with respect to nuclear reactors, means any apparatus and mechanism, the manipulation of which affects directly the reactivity or power level of the reactor; - when used with respect to any other facility, means apparatus and mechanism, the manipulation of which could affect the chemical, physical, metallurgical, or nuclear process of the facility in such a manner as to affect the protection of health and safety of the public against radiation;

(q) **"Design bases"** means the information which identifies the specific functions to be performed by a structure system or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be:

(1) restraints derived from generally accepted "state of the art" practices for achieving functional goals, or

(2) requirements derived from analysis (based on calculation and/or experiments) of the effects of a postulated accident for which a structure, system, or component must meet its functional goals.

(r) **"Reactor Coolant Pressure Boundary"** means all those pressure containing components of boiling and pressurized water-cooled nuclear power reactors, such as pressure vessels, piping, pumps, and valves, which are:

(1) Part of the reactor coolant system, or

(2) Connected to the reactor coolant system up to and including any and all of the following:

(i) The outermost containment isolation valve in system piping which penetrates primary reactor containment,

(ii) The second of two valves normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment,

(iii) The reactor coolant system safety and relief valves.

For nuclear power reactors of the direct cycle boiling water type, the reactor coolant system extends to and includes the outermost containment isolation valve in the main steam and feedwater piping.

(s) **"Backfitting"** means the addition, elimination or modification of structure, systems or components of a production or utilization facility after the license to construct or license to operate has been issued;

(t) **"Philippines"**, when used in a geographical sense, clues all the national territory comprising the Philippines archipelago, with all the islands and waters embraced therein, and all other territories belonging to the Philippines by historic right or legal title including the territorial sea, the air space, the subsoil, the sea bed, the insular shelves and the other submarine areas over which the Government of the Republic of the Philippines has sovereignty or jurisdiction. The waters around, between and connecting the islands of the archipelago, irrespective of their breadth and dimensions, form part of the internal waters of the Philippines;

(u) **"Person"** means any individual, partnership, private or public body, whether corporate or not, government agency other than the Commission, any international organization

enjoying legal personality under the law where the nuclear installation is situated, and any State or any of its constituent subdivisions; and any legal successor, representative agent or agency of the foregoing;

The term **"individual"** means a natural person;

(v) **"Individual operator"** means any individual who manipulates the controls of an atomic energy facility;

(w) **"Auxiliary Operators"** means non-licensed operators responsible for operations of systems and components of an atomic energy facility as directed by licensed operators;

(x) **"Produce"** when used in relation to special fissionable material, means (1) to manufacture, make, produce or refine special fissionable material; (2) to separate special fissionable material from other substances in which such material maybe contained; (3) to make or to produce new special fissionable material;

(y) **"Research and development"** means:
(1) theoretical analysis, exploration, or experimentation; or
(2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.

(z) **"Risk to the health and safety of the public"** means the radiological risk or hazard to health and safety of the Philippine public.

Section 3. Interpretations - No interpretation of the meaning of the regulations in this Part by any officer or employee of the Commission other than a written interpretation by the Commission will be recognized to be binding upon the Commission.

Section 4. Communications - All communications and report concerning the regulations in this Part should be addressed to the commissioner, Philippine Atomic Energy Commission, Don Mariano Marcos Avenue, Diliman, Quezon City, Metro Manila. (50.4)

II. LICENSE REQUIREMENTS, EXCEPTIONS

Section 6. License Required

(a) No person shall start the construction or operation of a production or utilization facility on any site in the Philippines unless an appropriate license to construct and/or license to operate has been issued by the Commission in accordance with the regulations in this Part. The term "construction" shall be deemed to include pouring the foundation for, or the installation of, any portion of the permanent facility on the site. In respect to nuclear power reactors, the term "operation" shall be deemed to inc1ude all activities starting with the initial core loading and throughout the lifetime of such facility. [50.10(b)]

(b) A license to construct an atomic energy facility will be issued if the application is in conformity with and acceptable under the regulations of the Code, and will be converted, upon due completion of the facility and Commission action, into a license to operate in accordance with the regulations of the Code. A license for the alteration of a production or

utilization facility will be issued if the application for such alteration is acceptable under Sections 61 and 62 in this Part. (50.23)

Section 7. Provisional Permit - A provisional permit shall be issued to the applicant to authorize commencement of construction of a facility. As used in this Part the term "commencement of construction" means any clearing of land, excavation or other substantial action that would adversely affect the environment of the site. Such substantial action may include:

(a) Preparation of the site for construction of the facility (such as clearing, grading, construction of temporary access roads and borrow areas;

(b) Installation of temporary construction support facilities (such as warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities and construction support buildings);

(c) Excavation for facility structures;

(d) Construction of service facilities such as roadways, paving, railroad spurs, fencing, exterior utility and lighting systems, transmission lines and sanitary sewerage treatment facilities); and

(e) Construction of structures, systems, and components which do not prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.

The provisional permit will be issued if the pertinent application among others as required in this Part, has been submitted to the Commission and the Commission has found that the proposed site is suitable for the construction and operation of the facility in accordance with Part 5 of the Code. [50.10(c) (e) (1) (i)]

Section 8. Exceptions - Nothing in this Part shall require a license for:

(a) The conduct of activities by or in behalf of the Commission;

(b) The transportation or possession of an atomic energy facility by a common or contract carrier or warehouseman in the regular course of carriage for another or storage incident thereto. (50.11)

Section 9. Specific Exemptions - Upon application by any interested person or upon its own initiative, the Commission may grant such exemptions from the requirements of the regulations in this Part provided that such exemptions are authorized by the Act, will not pose undue risk to the health and safety of the public, and are otherwise consistent with the national interest.

III. APPLICATION FOR PROVISIONAL PERMIT, LICENSES, FORMS, CONTENTS

Section 11. Filing of application -

(a) Place of filing - Each application for a provisional permit, or for a license to construct and operate, including whenever appropriate any amendment thereof, correspondence, reports or other written communications from the applicant pertaining to such application shall be

filed with the Commissioner, Philippine Atomic Energy Commission, Don Mariano Marcos Avenue, Diliman, Quezon City, Metro Manila.

(b) Number of copies of application; oath or affirmation; Docketing. –
  (1) Each application including amendments thereto, shall be executed in three (3) originals signed by the applicant or duly authorized officer thereof under oath or affirmation.
  (2) In addition, the applicant shall provide the Commission with six (6) copies of that information required by Section 14 (general information) and twenty (20) copies respectively of that portion of the application containing the information required by Section 15 (site investigation report), Section 16 (safety analysis report-construction phase) or Section 17 (safety analysis report -operating phase).

(c) An applicant proposing to construct and operate a facility at a proposed site initially shall file an application for a provisional permit to allow "commencement of construction" as provided in Section 7 of this Part.

(d) The holder of a provisional permit shall, at the time of submission of the safety analysis report-construction phase, file an application for license to construct and operate the facility.

(e) The holder of a license to construct shall, at the time of the submission of the safety analysis report-operating phase, file an amendment to its application for license to construct and operate for the issuance of a license to operate.

(f) The application shall be assigned a docket number or shall be docketed only upon determination that the application is sufficiently complete. (50.30)

Section 12. Combining Applications - An applicant may combine in one his several applications for different kinds of licenses under the regulations of the Code. (50.31)

Section 13. Elimination of Repetition - In his application, the applicant may incorporate by reference any relevant technical information contained in previous applications, statements or reports filed with the Commission, provided that such references are clear and specific. (50.32)

Section 14. General Information - Each application shall state:

(a) Name of applicant;

(b) Address of applicant;

(c) Description of business of applicant;

(d) If applicant is a corporation, state:
  (1) The date of its incorporation and the principal location where it does business:
  (2) The corporate purposes for which it was eatablished;
  (3) The names and addresses of its directors and its principal officers.

(e) The license applied for, the use to which the facility will be put, the period of time for which the license is sought, a list of other licenses, except operator's licenses, applied for in connection with the proposed facility, and in the case of nuclear power plants, the fuel requirements as specified in Section 76 of this Part.

(f) Information sufficient to demonstrate to the Commission the financial qualifications of the applicant and, in accordance with the regulations of the Code, the activities for which permit or license is sought, such as:

(1) Possession of funds necessary to cover estimated construction costs and related fuel cycle costs or that the applicant has reasonable assurance of obtaining the necessary funds, or a combination of the two:

(2) Possession of funds necessary to cover estimated operating costs or that the applicant has reasonable assurance of obtaining the necessary funds or a combination of the two;

(3) Possession or reasonable assurance of obtaining the funds necessary to cover the estimated costs of permanently shutting the facility down and maintaining it in a safe condition.

And any other information necessary to enable the Commission to determine the applicant's financial qualifications.

(g) If the application is for a license to operate a nuclear power reactor, the applicant shall submit the radiological emergency response plans of provinces and/or municipalities whose geographical jurisdictions are wholly or partially within the plume exposure pathway Emergency Planning Zone (EPZ), as well as the plans of provinces wholly or partially within the ingestion pathway EPZ.

Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 16 kms. in radius and the ingestion pathway EPZ shall consist of an area about 80 kms. in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to the emergency response needs and capabilities of provinces as they are affected by such conditions as demography, topography, land characteristics, access routes and jurisdictiona1 boundaries, as well as the authorized power level of the facility.

The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway. (50.33)

Section 15. Technical Information-Pre-Construction-Phase - An applicant for a provisional permit shall submit to the Commission a Site Investigation Report (SIR) containing detailed information on the:

(a) Characteristics of reactor design and proposed operation including:

(1) Intended use of the reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(2) The extent to which generally accepted engineering standards are applied to the design of the reactor;

(3) The extent to which the reactor incorporates unique or unusual features having a significant bearing on the probability or consequences of accidental release of radioactive materials;

(4) The safety features that are to be engineered into the facility and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur.

(b) Population density and use characteristics of the site environs, including the exclusion area, low population zone and population center distance.

(c) Physical characteristics of the site, including seismology, meteorology, geology and hydrology.

The report shall be accomplished by the applicant taking into account Part 5 (Reactor Site Criteria) of the Code. (100.10)

Section 16. Technical Information-Construction Phase - The application for license to construct shall include a Safety Analysis Report-Construction Phase. The minimum information to be included shall consist of the following:

(a) A description and safety assessment of the site on which the facility is to be located, with appropriate attention to features affecting facility design. Special attention should be directed to the site evaluation factors identified in Part 5 of the Code. Such assessment shall contain an analysis and evaluation of the major structures, systems and components of the facility which bear significantly on the acceptability of the site under the site evaluation factors identified in Part 5, assuring that the facility will be operated at the ultimate power level which is contemplated by the applicant. With respect to operation at the projected initial power level, the applicant shall submit the information prescribed in subparagraphs (b) to (h) of this Section as well as the information required by this subparagraph, in support of the application for a license to construct.

(b) A summary description and discussion of the facility, with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(c) The preliminary design of the facility, including:
  (1) The principal design criteria for the facility. Appendix A "General Design Criteria for Nuclear Power Plants" establishes minimum requirements for the principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which license to construct have previously been issued by the Commission and provides guidance to applicant for licenses to construct in establishing principal design criteria for other types of nuclear power units.
  (2) The design bases and the relation of the design bases to the principal design criteria.
  (3) Information relative to materials of construction, general arrangement and approximate dimensions sufficient to provide reasonable assurance that the final design will conform to the design bases with adequate margin for safety.

(d) A preliminary analysis and evaluation of the design and performance of structures, systems and components of the facility with the objective of assessing the risk to public health and safety resulting from the operation of the facility and including the determination of:
  (1) The margins of safety during normal operations and transient conditions anticipated during the life of the facility, and
  (2) The adequacy of the structures, systems and components provided for the prevention of accidents and the mitigation of the consequences of accidents.

  Analysis and evaluation of ECCS cooling performance following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of Section 28 of this Part.

(e) An identification and justification for the selection of those variables, conditions, or other items which are determined as the result of preliminary safety analysis and evaluation to be probable subject of technical specifications for the facility, with special attention given to those items which may significantly influence the final design.

(f) A preliminary plan for the applicant's organization, training of personnel and conduct of operations.

(g) A description of the quality assurance program to be applied to the design, fabrication, construction and testing of the structures, systems and components of the facility. Appendix B “Quality Assurance Criteria for Nuclear Power Plants", sets forth the requirements for quality assurance programs for nuclear power plants the description of the quality assurance program shall include a discussion of how the applicable requirements of Appendix B shall be satisfied.

(h) An identification of those structures, systems or components of the facility, if any, which require research and development to confirm the adequacy of their design; an identification and description of the research and development program which will be conducted to resolve any safety questions associated with such structures, systems or components and a schedule of the research and development program showing that such safety questions will be resolved at or before the latest date stated in the application for the completion of the construction of the facility.

(i) The technical qualifications of the applicant to engage in any proposed activities in accordance with the regulations of the Code.

(j) A discussion of the applicant's preliminary plans for coping with emergencies. Appendix C "Emergency Planning and Preparedness For Nuclear Power Plants" sets forth items which shall be included in these plans.

(k) An applicant who apply for licenses to construct for nuclear power plants to be built on multi-unit sites shall identify potential hazards to the structures, systems and components important to the safety of operating nuclear facilities from construction activities. A discussion also shall be included on any managerial and administrative controls that will be used during construction to assure the safety of the operating unit. (50.34)

(l) Design objectives for equipment to control releases of radioactive materials in effluents from nuclear power plants –

(1) A description of the preliminary design of the equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including the expected operational occurrences. The application also shall identify the design objectives, and the means to be employed for keeping the levels of radioactive materials in the effluents to unrestricted areas as low as reasonably is achievable (ALARA), taking into account the state of the technology and the economics of the improvements in relation to the benefits to the public health and safety and in relation to the utilization of atomic energy in the national interest. The guide set out in Appendix D of this Part provide numerical guidance on the design objectives for light water-cooled nuclear power reactors to meet the requirement that radioactive material in effluents released to unrestricted areas be kept as low as is reasonably achievable. These numerical guides for design objectives and listing conditions for operation are not to be construed as radiation protection standards.

(2) An estimate of:

(i) The quantity of each of the principal radionuclides expected to be released annually to unrestricted areas in liquid effluents produced during normal reactor operations; and

(ii) The quantity of each of the principal radionuclides of the gases, halides and particulates expected to be released annually to unrestricted areas in gaseous effluents produced during normal reactor operations.

(3) A general description or the provisions for packaging, storage, and shipment offsite of solid waste containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources. (50.34a)

Section 17. Technical Information and Specifications, Operating Phase - Each application for a license to operate a facility shall include a Safety Analysis Report-Operating Phase. The report shall include all the information that describes the facility, presents the design bases and the limits on its operation and presents a final safety analysis of the structures, systems and components, and of the facility as a whole; and shall include the following:

I. Technical Information -

(a) All current information, such as the results of environmental and meteorological monitoring programs which has been developed since the issuance of the license to construct, relating to site evaluation factors identified in Part 5 of the Code.

(b) A description and analysis of the structures, systems and components of the facility, with emphasis upon performance requirements, the bases$_1$ with technical justification therefore, upon which such requirements have been established, and the evaluation required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations.

(1) For nuclear reactors, such items as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency Systems, power conversion Systems, radioactive waste handling Systems, and fuel handling systems shall be discussed as appropriate.

(2) For facilities other than nuclear reactors, such items as the chemical, physical, metallurgical, or nuclear processes to be performed, instrumentation and control systems, ventilation and filter systems, electrical systems, auxiliary and emergency system and radioactive waste handling systems shall be discussed as appropriate.

(c) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in Part 3 of the Code.

(d) A final analysis and evaluation of the design and performance of structures, systems and components with the objective stated in paragraph (d) of Section 16 and taking into account any pertinent information developed since the submittal of the Safety Analysis Report-Construction Phase. Analysis and evaluation of ECCS cooling performance following a postulated loss-of-coolant accidents shall be performed in accordance with the requirements of Section 28.

(e) A description and evaluation of the results of the applicant's programs, including research and development, if any, to demonstrate that any safety questions identified during the construction stage have been resolved.

(f) The following information concerning facility operation:

(1) The applicant's organizational structure, allocations of responsibilities and authorities, and personnel qualifications requirements, such as those for the license operators, auxiliary operators and other members of the operating staff.

(2) Managerial and administrative controls to be used to assure safe operation of the facility in accordance with Appendix B of this Part. The information on such controls shall include a discussion of how the applicable requirements of Appendix B will be satisfied.

(3) Plans for pre-operational testing and initial operations.

(4) Plans for conduct of normal operations, including maintenance, surveillance, and periodic testing of structures, systems, and components.

(5) Plans for coping with emergencies, specified in Appendix C of this Part.

(6) Proposed technical specifications prepared in accordance with the paragraph II of this Section.

(g) The technical qualifications of the applicant to engage in the proposed activities in accordance with the Code.

(h) A description and plans for implementation of an operator requalification program. The program shall, as a minimum, meet the requirements for those programs contained in Appendix A of Part 8 of the Code. [50.34(b)]

(i) An applicant who apply for licenses to operate nuclear power plants in a multi-unit site shall include an eva1uation of the potential hazards to the structure systems, and components important to the safety of operating units resulting from the construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for the operations are not exceeded, as a result of construction activities at the multiunit site.

(j) (1) A description of the equipment and procedures for the control of gaseous and liquid effluents and for the maintenance and use of the equipment installed in radioactive waste systems, pursuant to subparagraph (1) (1) of Section 16; and

(2) A revised estimate of the information required in subparagraph (1) (2) of Section 16 if the expected releases and exposures differ significantly from the estimates submitted in the application for a license to construct. [50.34a(c)]

(k) Physical Protection. Program –

(1) Each application for a license to operate shall include a Physical Protection Program. The program shall consist of two parts. Part I shall address vital equipment, vital areas, and isolation zone, and shall demonstrate how the applicant plans to comply with the requirements of Part 9 of the Code. Part II shall list tests, inspections, and other means to be used to demonstrate compliance with such requirements.

(2) Each application for a license to operate a facility shall include a physical protection contingency plan in accordance with the criteria set forth in Appendix B of Part 9 of the Code. The said plan shall include plans for dealing with threats, thefts, and industrial sabotage as defined in Part 9, relating to the special fissionable material and nuclear facility licensed under the Code and in the applicant's possession and control. The application shall include the first four categories of information contained in the applicant's physical protection contingency plan. (The first four categories are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix. The fifth category of information, Procedures, does not have to be submitted for approval). [50.34(c)(d)]

II. <u>Technical Specifications</u> –

(a) The proposed technical specifications shall be in accordance with the requirements of this paragraph II. A summary statement of the bases or reasons for such specifications, other than those covering administrative control, shall also be included in the application, but shall not become part of the technical specifications.

(b) The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, as submitted to the Commission pursuant to Section 16 of this Part. The Commission may include such additional technical

specifications as the Commission finds appropriate. The technical specifications as approved by the Commission shall be included in the license to operate.

(c) Technical specifications will include items in the following categories:

(1) Safety limits, limiting safety systems settings, and limiting control settings –

(i) Safety limits are limits upon important process variables which are found to be necessary to project reasonably the integrity of certain physical barriers which guard against the uncontrolled release of radioactivity. If any safety limit is exceeded, the reactor shall be shutdown. The installation operator shall notify the Commission, review the matter and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude reoccurrence. Operation shall not be resumed until authorized by the Commission.

(ii) Limiting safety systems settings are automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting shall be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. If, during operation, the automatic safety system does not function as required, the installation operator shall take appropriate action, which may include shutting down the reactor. He shall notify the Commission, review the matter, and record the results of the review including the cause of the condition and the basis for corrective action taken to preclude reoccurrence. A complete, concise written report of the matter shall thereafter be submitted to the Commission.

(2) Limiting conditions for operation - Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation is not met, the installation operator shall shut down the reactor or follow any remedial action permitted by the technical specification until the condition can be met. The installation operator shall notify the Commission, review the matter and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude reoccurrence.

(3) Surveillance requirements - surveillance requirements are requirements relating to test, calibration or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within the safety limits, and that the limiting conditions of operation will be met.

(4) Design features - Design features to be included are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in subparagraph (1), (2), and (3) of paragraph 11(c) of this Section.

(5) Administrative controls - Administrative controls are the provisions relating to organization and management, procedures, record keeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. (50.36)

IV. STANDARDS FOR PROVISIONAL PERMIT AND LICENSES

Section 26. Standard for Provisional Permit - In determining the grant of a provisional permit allowing the “commencement of construction”, the Commission will be guided by the suitability of

the proposed site for the construction and operation of the facility in accordance with Part 5 of the Code.

Section 27. Common Standards in Licenses - In determining the issuance of a license to an applicant, the Commission will be guided by the following considerations:

(a) The processes to be performed, the operating procedures, the facility and equipment, the use of the facility, and other technical specifications, or the proposals in regard to any of the foregoing collectively provide reasonable assurance that the applicant will comply with the regulations in this Part, including the regulations in Part 3 of the Code and that the health and safety of the public will not be endangered.

(b) The proposed activities will serve a useful purpose proportionate to the quantities of special fissionable or source material to be utilized and are consistent with the policies set forth in Section 2 of the Act. [50.42(a)]

(c) The applicant is technically and financially qualified to engage in the proposed activities in accordance with the regulations of the Code.

(d) The applicant, if required by the Commission pursuant to the Act, has financial security to cover his liability for nuclear damage in accordance with Part 10 of the Code. (50.40)

Section 28. Acceptance Criteria for Emergency Core Cooling System (ECCS) For Light Water Nuclear Power Reactors.

(a) Each nuclear power reactor fueled with uranium oxide pellets within cylindrical zircaloy cladding shall be provided with Emergency Core Cooling System (ECCS) which shall be designed such that its calculated cooling performance following postulated loss-of-coolant accidents conforms to the criteria set forth in Paragraph (b) of this section. ECCS cooling performance shall be calculated in accordance with an acceptable evaluation model and shall be calculated for a number of postulated loss-of-coolant accidents of different sizes, locations, and other properties sufficient to provide assurance that the entire spectrum of postulated loss-of-coolant accidents is covered. Appendix E, “ECCS Evaluation Models”, sets forth certain required and acceptable features of evaluation models. Conformance with the criteria set forth in paragraph (b) of this Section with ECCS cooling performance calculated in accordance with an acceptable evaluation model, may require that restrictions be imposed on reactor operation.

(b)

(1) Peak cladding temperature - The calculated maximum fuel element cladding temperature shall not exceed 2200ºF.

(2) Maximum cladding oxidation - The calculated total oxidation of the cladding shall nowhere exceed 0.17 times the total cladding thickness before oxidation. As used in this subparagraph total oxidation means the total thickness of cladding metal that would be locally converted to oxide if all the oxygen absorbed by and reacted with the cladding locally were converted to stoichiometric zirconium dioxide. If cladding rupture is calculated to occur, the inside surfaces of the cladding shall be included in the oxidation beginning at the calculated time rupture. Cladding thickness before oxidation means the radial distance from inside to outside the cladding, after any calculated rupture or swelling has occurred before significant oxidation. When the calculated conditions of transient pressure and temperature lead to a prediction of cladding swelling, with or without cladding rupture, the unoxidized cladding

thickness shall be defined as the cladding cross-sectional area, taken at a horizontal plane at the elevation of the rupture where it occurs, or at the elevation of the highest cladding temperature if no rupture is calculated to occur, divided by the average circumference at that elevation. For ruptured cladding, the circumference does not include the rupture opening.

(3) Maximum hydrogen generation - The calculated total amount of hydrogen generated from the chemical reaction of the cladding with water or steam shall not exceed 0.01 times the hypothetical amount that would be generated if all of the metal in the cladding cylinders surrounding the fuel, excluding the cladding surrounding the plenum volume, were to react.

(4) Coolable geometry - Calculated changes in core geometry shall be such that the core remains amenable to cooling.

(5) Long-term cooling - After any calculated successful initial operation of the ECCS, the calculated core temperature shall be maintained at an acceptably low value, and decay heat shall be removed for the extended period of time required by the long-lived radioactivity remaining in the core.

(c) As used in this Section:

(1) Loss-of-coolant accidents (LOCA) are hypothetical accidents that would result from the loss of reactor coolant, at a rate in excess of the capability of the reactor coolant make-up system, from breaks in pipes in the reactor coolant pres8ure boundary up to and including a break equivalent in size to the double-ended rupture of the largest pipe in the reactor coolant system.

(2) An evaluation model is the calculational framework for evaluating the behavior of the reactor system during a postulated loss-of-coolant accident (LOCA). It includes one or more computer programs and all other information necessary for application of the calculational framework to a specific LOCA, sueb as mathematical models used, assumptions included in the programs, procedure for treating the program input and output information, specification of those portions of analysis not included in computer programs, values of parameters, and all other information necessary to specify the calculational procedure.

(d) The requirements of this Section are in addition to any other requirements applicable to ECCS set forth in this Part. The criteria set forth in paragraph (b) of this Section, with cooling performance calculated in accordance with an acceptable evaluation model are in implementation of the general requirements with respect to ECCS cooling performance design set forth in this Part, including in particular Criterion 35 of Appendix A of this Part. (50.46)

Section 29. Standards for Combustible Gas Control System in Light Water Cooled Power Reactors.

(a) Each nuclear power reactor fueled with oxide pellets within cylindrical zircaloy cladding, shall, as provided in paragraph (b) through (d) of this Section, include means for control of hydrogen gas that may be generated following a postulated loss-of-coolant accident (LOCA), by (1) metal-water reaction involving the fuel cladding and the reactor coolant, (2) radiolytic decomposition of the reactor coolant, and (3) corrosion of metals.

(b) Each nuclear power reactor fueled with oxide pellets within cylindrical zircaloy cladding shall be provided with the capability for (1) measuring the hydrogen concentration in the

containment, (2) insuring a mixed atmosphere in the containment, and (3) controlling combustible gas concentration in the containment following a postulated LOCA.

(c) For each nuclear power reactor fueled with oxide pellets within cylindrical zircaloy cladding, it shall be shown that during the time period following a postulated LOCA but prior to effective operation of the combustible gas control system, either: (1) An uncontrolled hydrogen-oxygen recombination would not take place in the containment: or (2) The plant could withstand the consequences of uncontrolled hydrogen-oxygen recombination without loss of safety function. If neither of these conditions can be shown, the containment shall be provided with an inerted atmosphere or an oxygen deficient condition in order to provide protection against hydrogen burning and explosions during thi8 time period.

(d) In compliance with Section 28(b), the amount of hydrogen contributed by core metal-water reaction (percentage of fuel cladding that reacts with water), as a result of degradation, but not total failure, of emergency core cooling functioning shall be assumed either to be five times the total amount of hydrogen calculated in demonstrating compliance with Section 28(b)(3), or to be the amount that would result from reaction of all the metal in the outside surfaces of the cladding cylinders surrounding the fuel (excluding the cladding surrounding the plenum volume) to a depth of 0.00023 inch (0.0058 mm), whichever amount is greater. A time period of 2 minutes shall be used as the interval after the postulated LOCA over which the metal-water reaction occurs.

(e) The primary means for controlling combustible gases following a LOCA shall consist of a combustible gas control system, such as recombiners, that does not result in a significant release from containment. Purging and/or repressurization shall not be the primary means for controlling combustible gases following a LOCA. However, the capability for controlled purging shall be provided.

(f) As used in this section:

(1) Degradation, but not total failure, of emergency core cooling functioning means that the performance of the emergency core cooling system is postulated for purposes of design of the combustible gas control system, not to meet the acceptance criteria in Section 28 in this Part and that there could be localized clad melting and metal-water reaction to the extent postulated in paragraph (d) of this Section. The degree of performance degradation is not postulated to be sufficient to cause core meltdown.

(2) A combustible gas control system is a system that operates after a LOCA to maintain the concentrations of combustible gases within the containment, such as hydrogen, below flammability limits. Combustible gas control Systems are of two types: (i) systems that do not result in a significant release from containment such as recombiners, and (ii) systems that allow controlled release from containment, through filters if necessary, such as purging systems and repressurization systems.

(3) A purging system is a system for the controlled release of the containment atmosphere to the environment through filters if needed.

(4) A represessurization system is a system used to dilute the concentration of combustible gas within containment by adding inert gas or air to the containment. Dilution of the combustible gas results in a delay in time until a flammable concentration is reached and permits fission product decay. Operation is limited to a containment repressurization of 50 percent of the containment design pressure. A purging system is normally part of the repressurization system. (50.44)

Section 30. <u>Emergency Plans.</u>

(a)

(1) No license to operate a nuclear power reactor will be issued unless a finding is made by the Commission that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

(2) The Commission will base its finding on a review of the Office of Civil Defense(OCD) findings and determination as to whether the emergency plans of municipalities and/or provinces are adequate and capable of being implemented, and on the Commission assessment as to whether the applicant's onsite emergency plans are adequate and capable of being implemented.

(b) The onsite and offsite emergency response plans for nuclear power reactors must meet the following standards:

(1) Primary responsibilities for emergency response by the installation operator and by provincial and/or municipal organization within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

(2) On-shift installation operator responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional area is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite and off site support and response activities are specified.

(3) Arrangements for requesting and effectively using assistance resources as well as arrangements to accommodate representatives of the provincial and/or municipal governments at the installation operator near-site Emergency Operations Center have been made, and other organizations capable of augmenting the planned response have been identified.

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the installation operator, and provincial and/or municipal governments response plans call for reliance on information provided by the installation operator for determinations of minimum initial offsite response measures

(5) Procedures have been established far notification, by the installation operator, of response organizations of provinces and/or municipalities and for notification of emergency personnel by all organizations, the content of initial and follow up messages to response organizations and the public has been established, and means to provide early notification and clear instruction to populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g. listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the

physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with national government guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with Emergency Worker and Lifesaving Activity Protective Action Guides, as adopted by the Commission.

(12) Arrangements are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

(14) Periodic exercises will be conducted to evaluate major portions of emergency response capabilities, periodic drills will be conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills will be corrected.

(15) Radiological emergency response training is provided to those who may be called on to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(c)

(1) Failure to meet the standards set forth in paragraph (b) of this Section may result in the Commission declining to issue a license to operate; however, the applicant will have an opportunity to demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the plant in question, that adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit plant operation.

(2) Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 16 kilometers in radius and the ingestion pathway EPZ shall consist of an area about 80 kilometers in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway. (50.47)

Section 31. Fire protection. Each operating nuclear power plant shall have a fire protection plan that satisfies Criterion 3 of Appendix A to this Part. This fire protection plan shall describe the overall fire protection program for the facility, identify the various positions within the installation operator's organization that are responsible for the program, state the authorities that are

delegated to each of these positions to implement those responsibilities, and outline the plans for fire protection, fire detection and suppression capability, and limitation of fire damage. The plan shall also describe specific features necessary to implement the program described above, such as administrative controls and personnel requirements for fire prevention and manual fire suppression activities, automatic and manually operated fire detection and suppression systems, and the means to limit fire damage to structures, systems, or components important to safety so that the capability to safely shutdown the plant is ensured. Appendix F to this Part establishes fire protection features required to satisfy Criterion 3 of Appendix A to this Part. (50.48)

V. ISSUANCE, LIMITATIONS AND CONDITIONS OF LICENSES

Section 41. Issuance of Licenses.

(a) Upon determination that an application for a license meets the standards and requirements of the Act and the regulations of the Code and that the notifications if any, to other agencies or bodies have been duly made the Commission shall issue a license in such form and containing such conditions and limitations including technical specifications as it deems appropriate and necessary. (50.50)

(b) When an applicant has not supplied initially all the technical information required to complete the application and support the issuance of a license to construct which approves all proposed design features, the Commission may still issue a license construct if the Commission finds that:

(1) the applicant has described the proposed design of the facility, including, but not limited to the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

(2) Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the Safety Analysis Report-Operating Phase;

(3) Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

(4) On the basis of the foregoing, there is reasonable assurance that:

(i) Such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility; and

(ii) Taking into consideration the site criteria contained in Part 5 of the Code, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public.

(c) A license to construct will constitute an authorization to the applicant to proceed with the construction but will not constitute the Commission's approval of the safety of any design features or specification unless the applicant specifically requests such approval and such approval is incorporated in the license. The applicant, at his option, may request such approval in the license to construct or, from time to time by amendment of his license. The Commission may, in its discretion, incorporate in any license to construct provisions requiring the applicant to furnish periodic reports of the progress and results of research and development programs designed to resolve safety questions.

(d) Any license to construct will be subject to the limitation that a license to operate will not be issued by the Commission until:

(1) The applicant has submitted to the Commission, by amendment to the application, the complete Safety Analysis Report-operating Phase, portions of which may be submitted and evaluated from time to time; and

(2) The Commission has found that the final design provides reasonable assurance that the health and safety of the public will not be endangered by operation of the facility in accordance with the requirements of the license and the regulations of the Code. (50.35)

Section 42. Period of License; Renewal. Each license shall be issued for a specified period, as determined by the Commission depending on the type of activity to be licensed, but not exceeding thirty five (35) years and may be renewed upon the expiration of such period.

Section 43. Combining Licenses. The Commission may combine in a single license the activities of an applicant which would otherwise be licensed separately. (50.52)

Section 44. Inherent Conditions Common to Licenses. Whether stated therein or not, the following shall be deemed conditions in every license issued:

(a) No right to the special fissionable material shall be conferred by the license unless expressly defined in the license.

(b) The license, including any right thereunder, or any right to utilize or produce special fissionable material shall not be transferred, assigned or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission, after securing full information finds that the transfer or disposition is in accordance with the purposes and provisions of the Act and gives its authorization in writing.

(c) The license shall be subject to revocation, suspension, modification, or amendment for cause as provided in the Act and the regulations of the Code, in accordance with the procedures provided by the Act and the regulations of the Code.

(d) The installation operator shall at any time before expiration of the license, upon request of the Commission, submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended or revoked.

(e) The issuance or existence of the license shall not be deemed to waive or relieve the installation operator from compliance with the requirements of existing laws, as appropriate.

(f) The license shall be subject to the provisions of the Act, to all pertinent regulations and orders of the Commission, and to any amendments thereof.

(g) Except as provided in Section 10 of Part 8 of the Code, the installation operator shall not permit the manipulation of the controls of its facility by anyone who is not a licensed operator or senior operator as provided in Part 8 of the Code.

(h) Within three (3) months after issuance of a license to operate, the installation operator shall have in effect an operator requalification program which shall as a minimum, meet the requirements of Appendix A of Part 8 of the Code. Notwithstanding the provisions of Section 51 of this Part, the installation operator shall not, except as specifically authorized by the Commission, make a change in an approved operator requalification program by

which the scope, time allotted for the program or frequency in conducting different parts of the program is decreased.

(i) The operation of apparatus and mechanism other than controls which may affect the reactivity or power level of a reactor, shall be manipulated only with the knowledge and consent of a licensed operator or senior operator present at the controls.

(j) A duly licensed operator or senior operator shall be present at the controls at all times during the operation of the facility.

(k) The installation operator shall designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to Part 8 of the Code.

(l) A senior operator licensed pursuant to Part 8 of the Code shall be present at the facility or readily available on call at all times during its operation, and shall be present at the facility during initial start-up and approach to power; recovery from an unplanned or unscheduled shutdown or significant reduction in power and refueling, or as otherwise prescribed in the facility license.

(m) The holder of a license shall not make any change in technical specifications nor make any change in the facility or the procedures as described in the safety analysis report or to conduct tests or experiments not described in the safety analysis report, which involves an unreviewed safety question or a change in technical specifications, except as authorized pursuant to a license.

(n) Primary reactor containments for water-cooled power reactor shall be subject to the requirements set forth in Appendix G.

(o) The installation operator shall prepare and maintain a physical protection contingency plan procedures in accordance with Appendix B of Part 9 of the Code for effecting the action and decisions contained in the Responsibility Matrix of the said plan. The installation operator may make no change which would decrease the effectiveness of a physical protection program prepared pursuant to Section 17(k)(l) of this Part or Part 9 of the Code, or of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, Responsibility Matrix) contained in a physical protection contingency plan of the installation operator prepared pursuant to Section 17(k)(2) of this Part or Part 9 of the Code, as applicable, without prior approval of the Commission. An installation operator desiring to make such a change shall submit an application for an amendment to his license pursuant to Section 61 of this Part. It may make changes to the physical protection program or to the physical protection contingency plan without prior Commission approval if the changes do not decrease the safeguards effectiveness of the plan. It shall maintain records of changes to the plans made without prior Commission approval for a period of two years from the date of the change, and shall furnish the Commission a report containing a description of each change within two months after the change is made. Prior to the physical protection contingency plan being put into effect, the installation operator shall have:

(1) All security capabilities specified in the physical protection contingency plan available and functional,

(2) Detailed procedures developed according to Appendix B of Part 9 of the Code available at the site, and

(3) All appropriate personnel trained to respond to safeguards incidents as outlined in the plan and specified in the detailed Procedures. It shall provide for the development, revision, implementation, and maintenance of its physical protection contingency plan. To this end, it shall provide for a review at least every 12 months of the physical protection contingency plan by individuals independent of both

security program management and personnel who have direct responsibility for implementation of the security program. The review shall include a review and audit of physical protection contingency procedures and practices, an audit the security system testing and maintenance program, and a test of the physical protection system along with commitments established for response by local law enforcement authorities. The results of the review and audit, along with recommendations for improvements, shall be documented reported to its corporate and plant management, and kept available at the plant for inspection for a period of two years.

(p) An installation operator shall follow and maintain in effect emergency plans which meet the standards in Section 30(b) of this Part and the requirements of Appendix C of this Part. It may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of Section 30(b) of this Part and the requirements of Appendix C of this Part. Proposed changes that decrease the effectiveness of the approved emergency plans shall not be implemented without application to and approval by the Commission. It shall furnish tie Commission 3 copies of each proposed change for approval and/or if a change is made without prior approval, 3 copies shall be submitted within 30 days after the change is made or proposed.

(q) Each installation operator shall submit to the Commission the radiological emergency response plans of provinces and/or municipalities that are wholly or partially within plume exposure pathway EPZ and ingestion pathway EPZ.

(r) The installation operator shall provide for the development, revision, implementation, and maintenance of its emergency preparedness program. To this end, it shall provide for a review of its emergency preparedness program at least every 12 months by persons who have no direct responsibility for implementation of the emergency preparedness program. The review shall include an evaluation for adequacy of the installation operator's interfaces with provincial and/or municipal governments on drills, exercises, capabilities, and procedures. The results of the review, along with recommendations for improvements, shall be documented, reported to the installation operator's corporate and plant management and retained for a period of five years The part of the review involving the evaluation for adequacy of interface with said local governments shall be available to the said local governments. (50.54)

Section 45. <u>Conditions of Licenses to Construct</u>. Each license to construct shall be subject to the following terms and conditions:

(a) The permit shall state the earliest and latest dates for completion of the construction or modification of the facility.

(b) If the proposed construction or modification of the facility is not completed by the latest completion date, the license shall expire and all rights thereunder shall be forfeited, provided, however, that upon good cause shown, the Commission will extend the completion date for a reasonable period of time. The Commission will recognize among other things, developmental problems attributable to the experimental nature of the facility, or fire, flood, explosion, construction difficulties not ordinarily met, labor strike, sabotage, domestic violence, enemy action, an act of the elements and other acts beyond the control of the license holder, as a basis for extending the completion date.

(c) Except as modified by this Section and Section 47 of this Part, the license to construct shall be subject to the same conditions prescribed in Section 44 of this Part.

(d) At or about the time of completion of the construction or modification of the facility, the applicant will file any additional information needed to bring the original application for license up to date, and will file an application for a license to operate or an amendment to an application for a license to construct and operate the facility for the issuance of a license to operate, as appropriate, as specified in Section 11(e) of this Part.

(e)

(1) For any license to construct a nuclear power plant, the holder of the license shall notify the Commission of each deficiency found in design and construction, which, were it to have remained uncorrected, could have affected adversely the safety of operations of the nuclear power plant at any time throughout the expected lifetime of the plant, and which represents:

(i) a significant breakdown in any portion of the quality assurance program conducted in accordance with the requirements of Appendix B of this Part; or

(ii) a significant deficiency in final design as approved and released for construction such that the design does not conform to the criteria and bases stated in the safety analysis report or license to construct; or

(iii) a significant deficiency in construction of, or significant damage to a structure, system, or component which will require extensive evaluation, extensive redesign, or extensive repair to meet the criteria and bases stated in the safety analysis report or license to construct or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function; or

(iv) a significant deviation from performance specifications which will require extensive evaluation, extensive redesign, or extensive repair to establish the adequacy of a structure, system, or component to meet the criteria and bases stated in the safety analysis report or license to construct, or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function.

(2) The holder of a license to construct shall within 24 hours notify the Commission of each reportable deficiency.

(3) The holder of a license to construct shall also submit a written report on a reportable deficiency within thirty (30) days to the Commission. The report shall include a description of the deficiency, an analysis of the safety implications and the corrective action taken, and sufficient information to permit analysis and evaluation of the deficiency and of corrective action. If sufficient information is not available for a definitive report to be submitted within 30 days, an interim report containing all available information shall be filed, together with a statement as to when a complete report will be filed. (As amended by Adm. Order No. 01, Series of l978)

(4) Remedial action may be taken both prior to and after notification of the Commission, subject to the risk of subsequent disapproval of such action by the Commission. (50.55)

Section 46. <u>Conditions of Licenses to Operate.</u> Each license to operate a nuclear power reactor shall include the following conditions:

(a) Technical specifications derived from the analysis and evaluation included in the safety analysis report operating phase and amendments thereto. Additional technical specifications may be included as the Commission finds appropriate. (50.36(b))

(b) Technical specifications on effluents from nuclear power plants.

(1) In order to keep releases of radioactive materials to unrestricted areas during normal plant operations, including expected operational occurrences, as low as is reasonably achievable (ALARA) within the meaning provided in Section 16(1) of this Part, each license to operate a nuclear power plant shall include technical specifications that, in addition to requiring compliance with the applicable provisions of Part 3 of the Code require:

(i) That operating procedures developed pursuant to Section 17(j)(l) for the control of effluents be established and followed, and that equipment installed in the radioactive waste system pursuant to Section 16(l)(1) be maintained and used;

(ii) The submission of a report within 60 days after January 1st and July 1st of each year to the Commission specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six (6) months of operation, such other information as may be required by the Commission to estimate maximum potential annual radiation doses to the public resulting from effluent releases. If quantities of radioactive materials released during the reporting period are significantly above design objectives, the report shall cover this specifically. On the basis of such reports and any additional information which the Commission may obtain from the installation operator or others, the Commission may from time to time require the installation operator to take such action as the Commission deems appropriate.

(2) In establishing and implementing the operating procedures described in paragraph (b) of this Section, the installation operator shall be guided by the following considerations:
Experience with the design, construction and operation of nuclear power reactors indicate that compliance with the technical specifications described in this Section will keep average annual releases of radioactive material in effluents at small percentages of the limits specified in Part 3 of the Code and in the license to operate. At the same time, the installation operator is permitted the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided with a dependable source of power even under unusual operating conditions which may temporarily result in releases higher than such small percentages, but still within the limits specified in Part 3 of the Code and the license to operate. It is expected that in using this operational flexibility under unusual operating conditions, the installation operator will exert his best efforts to keep levels of radioactive material in effluents as low as is reasonably achievable (ALARA). (50.36a)

Section 47. <u>Industry Codes and Standards as Conditions to Licenses to Construct and to Operate</u>. Each license to operate a boiling or pressurized water-cooled nuclear power facility shall be subject to the conditions in paragraph (b) of this Section and each license to construct such facility shall be subject to the following conditions in addition to those specified in Section 45:

(a)

(1) Structures, systems, and components shall be designed, fabricated, erected, constructed, tested and inspected to quality standards commensurate with the importance of the safety function to be performed.

(2) As a minimum, the system and components of the facility which are part of the reactor coolant pressure boundary as defined in this Part, such as the pressure vessels, pipings, pumps, and valves, shall meet the requirements applicable to the safety classification of said systems or components; while the requirements for in-

service inspection, protection systems and fracture toughness shall be those set forth in paragraphs (b), (c), and (d), respective1y, of this Section and as are set forth in those appropriate parts of the industry code including its addenda, if any, which are in effect in the supplier country on or after the respective dates of the orders for said systems and components, except as authorized by the Commission upon demonstration by the applicant for or holder of a license to construct that:

(i) Design, fabrication, installation, testing, or inspection of the specified system or component, is to the maximum extent practical, in accordance with generally recognized industry codes and standards, and compliance with the requirements as prescribed above would result in hardships or unusual difficulties without a compensating increase in the 1evel of quality and safety; or

(ii) Proposed alternatives to the prescribed requirements or portions thereof will provide an acceptable level of quality and safety.

(b) (1) **In-service Inspection requirements:**

(i) Components which are classified as Safety Class 1 shall be designed and be provided with access to enable the performance of in-service examination of such components and shall meet the pre-service examination requirements of the industry code and standards applied to the construction of said components;

(ii) Components which are classified as Safety Class 2 and Class 3 and supports for components classified as Safety Class 1, Class 2, and Class 3 shall de designed and be provided with access to enable the performance of in-service examination of such components and shall meet the pre-service examination requirements set forth in the industry code and standards applied to the construction of said components;

(iii) Pumps and valves which are classified as Safety Class 1 shall be designed and be provided with access to enable the performance of in-service testing of the pumps and valves for assessing operational readiness set forth in the industry code and standards applied to the construction of said pumps or valves;

(iv) Pumps and valves which are classified as Safety Class 2 and Class 3 shall be designed and be provided with access to enable the performance of in-service testing of the pumps and valves for assessing operational readiness as set forth in the industry code and standards applied to the construction of said pumps or valves.

(2) Throughout the service life of the facility, components (including supports) which are classified as Safety Class 1, Class 2 and Class 3 shall meet the requirements, except design and access provisions and pre-service examination requirements, set forth hereunder to the extent practical within the limitation of design, geometry and materials of construction of the components:

(i) In-service examinations of components, in-service tests to verify operational readiness of pumps and valves whose function is required for safety, and systems pressure tests, conducted during the initial 120-month inspection interval shall comply with the requirements of the latest edition and addenda of the industry code in effect 12 months prior to the date of the issuance of the license to operate or as the Commission may direct.

(ii) In-service examinations of components, in-service tests to verify operational readiness of pumps and valves whose function is required for safety, and system pressure tests, conducted during successive 120-month inspection intervals shall comply with the requirements of the latest edition and

addenda of the code in effect 12 months prior to start of the 120-month inspection intervals or as the Commission may direct.

(iii) In-service examinations of components, test of pumps and valves, and system pressure tests, may meet the requirements set forth in subsequent editions and addenda of the applicable industry code subject to the approval of the Commission. Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

(3)

(i) The in-service inspection program for the facility shall be revised by the installation operator as necessary, to meet the requirements of paragraph (b) (2) of this Section.

(ii) If a revised in-service inspection program for a facility conflicts with the technical specification for the facility, the installation operator shall apply to the Commission for amendment of the technical specifications to conform the technical specification to the revised program. The application shall be submitted at least 6 months before the start of the period during which the provisions become, applicable as determined by paragraph (b)(2) of this Section.

(iii) If the installation operator has determined that conformance with certain industry code requirements is impractical for its facility, the installation operator shall notify the Commission and submit information to support its determinations.

(iv) Where an examination or test requirement by the industry code or addenda is determined to be impractical by the installation operator and is not included in the revised in-service inspection program as permitted by paragraph (b)(2) of this Section, the basis for this determination shall be demonstrated to the satisfaction of the Commission not later than 12 months after the expiration of the initial 120-month period of operation from start of facility commercial operation and the subsequent 120-month period of operation during which the examination or test is determined to be impractical.

(4)

(i) The Commission will evaluate determinations under paraqraph (b) (3) of this Section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as authorized by law and will not endanger life or property or the national interest giving due consideration to the burden that could result upon the installation operator if the requirements were imposed on the facility.

(ii) The Commission may require the installation operator to follow an augmented in-service inspection program for systems and components for which the Commission deems that added assurance of structural reliability is necessary.

(c) Protection systems – the protection systems of facilities shall meet the requirements set forth in the editions or revisions of electrical and electronics engineering standards in effect at the filing of the application for license to construct. Protection systems may meet the requirements set forth in subsequent editions or revisions of such standards which become effective.

(d) Fracture toughness requirements – Pressure retaining components of the reactor – deals of the coolant pressure boundary shall meet the requirements set forth in Appendices H and I of this Part. (50.55a)

Section 48. <u>Conversion of License to Construct into License to Operate or Amendment of License.</u> Upon completion of the construction or modification of a facility, in compliance with the terms and conditions of the license to construct and subject to any necessary testing of the facility for health or safety purposes, the Commission will, in the absence of: good cause shown to the contrary, issue a license to operate or an appropriate amendment of the license, as the case may be. (50.56)

Section 49. <u>Issuance of License to Operate</u> -

(a) Pursuant to Section 48, a license to operate may be issued by the Commission up to the full term authorized under Section 42 in this Part, upon finding that:
   (1) Construction of the facility has been substantially completed, in conformity with the license to construct and the application as amended, the provisions of the Act, the Code and other requirements of the Commission.
   (2) The facility will operate in conformity with the application as amended, the provisions of the Act, the Code and other requirements of the Commission.
   (3) The operation of the facility is consistent with the policies declared in Section 2 of the Act.
   (4) There is reasonable assurance that -
      (i) The activities authorized by the license to operate can be conducted without undue risk to the health and safety of the public; and
      (ii) Such activities will be conducted in compliance with the Code.

   (5) The applicant is technically and financially qualified to engage in the activities authorized by the license to operate in accordance with the Code; and
   (6) The applicant, if required by the Commission pursuant to the Act and Part 10 of the Code, has financial security to cover his liability for nuclear damage.

(b) Each license to operate will include appropriate provisions with respect to any uncompleted items of construction and such limitations or conditions as are required to assure that operation during the period of the completion of such items will not endanger public health and safety. (50.57)

Section 50. <u>Review by Nuclear Safety Advisory Board Notice and Hearing</u> -

(a) The Commission may, at any stage of the proceedings for the grant of a license to construct or a license to operate, or application for amendment thereof , refer to a nuclear safety advisory board such portion or portions of the application as it may deem necessary or appropriate for review and report within a reasonable period of time as the Commission may set but not to exceed 90 days from the date of receipt of the Commission's request for review. The opinions and reports of the Board shall be made in writing and shall be made available to the public.

(b) After at least 30 days notice and publication in a newspaper of general circulation on an application for a license to construct and operate or amendments thereto, the Commission, pursuant to the Act:
   (1) Shall hold a hearing upon the request of any person whose interest may be affected by the application.
   (2) May issue a license to construct or a license to operate or an amendment thereto without a hearing in the absence of a request therefor.

(c) In the case of the application for an amendment to a license to construct or a license to operate, the Commission may dispense with the notice and publication specified in

paragraph (b) of this Section and may issue an amendment to the license to construct or license to operate if the Commission finds that no significant hazards consideration is presented. (50.58)

Section 51. <u>Authorization of Changes, Tests and Experiments</u> -

(a)

(1) The holder of a license to operate may:

(i) make changes in the facility as described in the Safety Analysis Report-Operating Phase7

(ii) make changes in the procedures as described in the said safety analysis report; and

(iii) conduct tests or experiments not described in the said safety analysis report.

without prior Commission approval, unless the proposed change, test or experiment involves a change in the technical specifications incorporated in the license, or an unreviewed safety question. If the proposed change, test or experiment involves a change in the technical specifications or an unreviewed safety question, it shall not be carried out unless authorized by the Commission pursuant to the procedures set forth in this Section.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question:

(i) If the probability of occurrence or the consequences of an accident or malfunction of equipment previously evaluated as important in the safety analysis report may be increased; or

(ii) If a possibility for an accident or malfunction of a different type previously evaluated in the safety analysis report may be increased; or

(iii) If the margin of safety as defined in the basis for any technical specification is reduced.

(b) The installation operator shall maintain records of changes in the facility and in the procedures made without prior approval of the Commission pursuant to this Section to the extent that such changes constitute changes in procedures as described in the safety analysis report. The installation operator shall also maintain records of tests and experiments carried out without prior approval of the Commission pursuant to this Section. These records shall include a written safety evaluation which provides the bases for the determination that the change, test or experiment does not involve an unreviewed safety question. The installation operator shall furnish the Commission, annually or at such shorter intervals as may be specified in the license, a report containing a brief description of such changes, tests and experiments, including a summary of the safety evaluation of each.

(c) The holder of a license who desires (1) a change in technical specifications or (2) to make a change in the facility or the procedures as described in the safety analysis report or to conduct tests or experiments not described in the safety analyses report, which involves an unreviewed safety questions or changes in technical specifications, shall submit an application for amendment of its license pursuant to Section 61 of this Part. (50.59)

Section 52. <u>Detailed Technical Review</u> - As an integral part for the determination on whether the application for a license or amendment thereto shall be granted or denied, a detailed technical review of the site investigation report, or safety analysis report or part thereof, as the case may be, shall be undertaken by the Commission's staff, utilizing applicable standard review plans including other standards adopted and/or developed for such purpose. The review shall include a

determination on whether or not the information submitted satisfactorily address the regulatory requirements and/or standards imposed on the applicant.

VI. AMENDMENT OF LICENSES

Section 61. Application for Amendment - Whenever a holder of a license to construct or a license to operate desires to amend the license, application for an amendment shall be filed with the Commission, fully describing the changes desired, and following as far as applicable the form prescribed for original applications. (50.90)

Section 62. Issuance of Amendment - In determining whether an amendment to a license will be issued to the Applicant, the Commission will be guided by the considerations which govern the issuance of initial license to construct or license to operate, as appropriate. If the application involves the material alteration of a licensed facility, a license to construct will be issued prior to the issuance of the amendment to the license. (50.91)

VII. REVOCATION, SUSPENSION, MODIFICATION OF LICENSES, EMMERGENCY OPERATION BY THE COMMISSION, BACKFITTING

Section 66. Revocation, Suspension, Modification of Licenses for Cause - Subject to the provisions of Section 31 of the Act and the rules and regulations of the Code, a license to construct or a license to operate may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application in the supplemental or other statement of fact required of the application, or because of conditions revealed by the application or statement of fact or any report, record, inspection, or other means, which would warrant the Commission to refuse to grant a license on an original application, or for failure to construct or operate a facility in accordance with the terms of the license, provided that failure to make timely completion of the proposed construction or alteration of a facility under a license to construct shall be governed by the provisions of Section 45(b) of this Part; or for violation of, or failure to observe, any of the terms and provision of the Act, the Code or orders of the Commission.

Section 67. Taking Possession of Special Fissionable Material - Upon revocation of a license, may immediately take possession of all materials held by the installation operator pending appropriate and lawful disposition thereof by or for installation operator. (50.101)

Section 68. Prior and Preferential Rights of Government Over Special Fissionable Material - The Rent of the Republic of the Philippines, acting through the Commission, shall have the right to acquire any special fissionable material owned by a person in the Philippines. Such rights may be exercised only when in the view of the Commission the development of atomic energy in the Philippines or the national interest so requires. The acquisition of special fissionable material pursuant to this Section shall be made for a fair and reasonable price. (Sec. 21, R.A. 5207)

Section 69. Commission Order for Operation after Revocation - Whenever the Commission finds that the public convenience and national interest or the national nuclear power program require continued operation of a facility, the license for which has been revoked, the Commission may, after consultation with appropriate Government agencies having jurisdiction, order that possession be taken of such facility and that it be operated for a period of time as, in the judgment of the Commission, the public convenience and national interest or the national nuclear power

program may require, or until a license to operate the facility shall become effective. Just compensation shall be paid for the use of the facility. (50.102)

Section 70. Suspension and Operation in War or National Emergency

(a) Whenever the appropriate government authority declares that a state of war or national emergency exists, the Commission$_1$ if it finds it necessary to protect the security of the State may:
(1) Suspend any license it has issued.
(2) Take possession of special fissionable material.
(3) Order the operation of any licensed facility.
(4) Order entry into any facility by its representatives jointly with authorized representatives of the Ministry of National Defense in order to take possession of special fissionable material or to operate the facility or to take such measures as may be necessary.

(b) Just compensation shall be paid for any damages caused by taking possession of special fissionable material or by operation of any facility pursuant to this Section. (50.103)

Section 71. Backfitting -

(a) The Commission may in accordance with the procedures specified in the Code, require the backfitting of a facility if it finds that such action will provide substantial additional protection which is required for the public health and safety or in the national interest.

(b) Nothing in this Section shall be deemed to relieve the holder of a license to construct or a license to operate from compliance with the regulations or orders of the Commission.

(c) The Commission may at any time require the holder of a license to construct or a license to operate to submit such information concerning the addition or proposed addition, the elimination or proposed elimination, modification or proposed modification of structures, systems or components of a facility as it deems appropriate. (50.109)

VIII. NUCLEAR FUEL REQUIREMENTS; INTERNATIONAL OBLIGATIONS

Section 76. Special Fissionable Material Required -The applicant for license to construct and/or operate a nuclear power plant shall include in its application detailed information on the quantity, enrichment and weight of special fissionable material needed for fuel during the useful economic life of the facility.

Section 77. Shipping and Transport Requirements -Each shipment of special fissionable material shall comply with applicable requirements of the Code.

Section 78. Safeguards - Each holder of a license to construct and/or operate shall, if requested by the Commission, submit facility information, permit verification thereof by the International Atomic Energy Agency (IAEA) or its authorized inspectors, and take such other action as may be necessary to implement the Philippine Safeguards Agreement in the manner set forth in the provision of the Code. (50.78)

IX. INSPECTION, RECORDS, REPORTS

Section 81. Inspections.

(a) Each holder of a license shall permit inspection by duly authorized representatives of the Commission, its record, premises, activities, and of licensed materials in possession or use, re1ated to the license as may be necessary to effectuate purposes of the Act.

(b)

(1) Upon request of the Commission, each holder of license shall provide rent-free office space for the exclusive use of the Commission inspection personnel. Office furnitures, communication equipment, air conditioning light, electrical outlets and janitorial services shall likewise be furnished. The office shall be convenient to and have full access to the facility and shall provide the inspectors both visual and acoustic privacy. Said office shall be subject to the approval of the Commission.

(2) The holder of a license shall afford any Commission resident inspector assigned to that site, or other authorized Commission inspectors immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection and personal safety. (50.70)

Section 82. Maintenance of Records, Making of Reports.

(a) Each holder of a license shall maintain such record and make such reports, in connection with the licensed activity, as may be required by the conditions of the license, or by other regulations and orders of the Commission in effectuating the purposes of the Act.

(b) Each holder of a license shall file with the Commission two copies of its annual financial report, including the certified financial statements.

(c) Records which are required by the regulations in this part, by license condition, or by technical specification, shall be maintained for the period specified by the appropriate regulation, license condition, or techinical specification. If a retention period is not otherwise specified, such records shall be maintained until the Commission authorizes their disposition.

(d)

(1) Records which must be maintained pursuant to this Part may be the original or a reproduced copy or microform, if such copy is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified in this Part.

(2) If there is a conflict between the Commission's regulations, license condition, or technical specification, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this Part for such records shall apply unless the Commission, pursuant to Section 9 of this Part, has granted a specific exemption from the record retention requirements specified in this Part.

(e) Each installation operation shall update periodically the Safety Analysis Report-Operating Phase originally submitted as part of the application for the license to operate to assure that the information included in the safety analyses report contains the latest material developed. This submittal shall contain all the changes necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement since the submission of the original safety analysis report or, as appropriate the last

updated safety analysis report. The updated report shall be revised to include the effects of: All changes made in the facility or procedures as described in the report; all safety evaluations performed by the installation operator either in support of requested license amendments or in support of conclusions that changes did not involve an unreviewed safety questions; and all analyses of new safety issues performed by or on behalf of the installation operator at Commission request. The updated information shall be appropriately located within the safety analysis report.

(1) Revisions containing updated information shall be submitted on a replacement-page basis and shall be accompanied by a list which identifies the current pages of the report following page replacement. One (1) signed original and six (6) additional copies of the required information shall be filed with the Commission.

(2) The submittal shall include (i) A certification by a duly authorized officer of the installation operator that either the information accurately presents changes made since the previous submittal, necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement, or that no such changes were made; and (ii) An identification of changes made under the provisions of Section 51 of this Part but not previously submitted to the Commission.

(3) Revisions shall be filed no less frequently than annually and shall reflect all changes up to a maximum of six (6) months prior to the date of filing.

(4) Each replacement page shall include both a change indicator for the area changed, e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number of both). (50.71)

Section 83. <u>Notification of Significant Events.</u>

(a) Each installation operator shall notify the Commission as soon as possible and in all cases within one hour by telephone of the occurrence of any of the following significant events and shall identify that event as being reported pursuant to this section:

(1) Any event requiring initiation of the emergency plan or any section of that plan, as provided in Section 30 of this Part.

(2) The exceeding of any Technical Specification Safety Limit.

(3) Any event that results in the nuclear power plant not being in a controlled or expected condition while operation or shut down.

(4) Any act that threatens the safety the nuclear power plant or site personnel, or the security of special fissionable material, including instances of sabotage or attempted sabotage.

(5) Any event requiring initiation of shut down of the nuclear power plant in accordance with Technical Specification Limiting Conditions for Operation.

(6) Personnel error or procedural inadequacy which, during normal operations, anticipated operational occurrences, or accident conditions, prevents or could prevent, by itself, the fulfillment of the safety function of those structures, systems, and components important to safety that are needed to:

(i) shut down the reactor safely and maintain it in a safe shutdown condition, or

(ii) remove residual heat following reactor shutdown, or

(iii) limit the release of radioactive material to acceptable levels or reduce the potential for such release.

(7) Any event resulting in manual or automatic actuation of Engineered Safety Features, including the Reactor Protection System.

(8) Any accidental, unplanned, or uncontrolled radioactive release. (Normal or expected releases from maintenance or other operational activities are not included.)

(9) Any fatality or serious injury occurring on the site and requiring transport to an offsite medical facility for treatment.

(10) Any serious personnel radioactive contamination requiring extensive onsite decontamination or outside assistance.
(11) Any event meeting the criteria for notification of incidence pursuant to Part 3 of the Code.
(12) Strikes of operating employees or security guards, or honoring of picket lines by these employees.

(b) with respect to the events reported under subparagraphs (1), (2), (3), and (4) of paragraph (a) of this Section, the installation operator, in addition to the prompt telephone notification, shall also establish and maintain an open, continuous communication channel with the Commission, and shall close this channel only when notified by the Commission. (50.72)

X. SURRENDER OF LICENSES

Section 91. Applications for Termination of Licenses.

(a) Any installation operator may apply to the Commission for authority to surrender a license voluntarily and to dismantle the facility and dispose of its component parts. The Commission may require information including particulars on proposed procedures for the disposal of radioactive material, decontamination of the site and other procedures, to provide reasonable assurance that the dismantling of the facility and disposal of the component parts will be performed in accordance with the Code and will not pose undue risk to the health and safety of the public.

(b) If the application demonstrates that the dismantling of facility and disposal of the component parts will comply with the standards specified in paragraph (a) of this Section and are consistent with the policy and purposes of the Act, and after notice to interested persons, the Commission may issue an order authorizing such dismantling and disposal and providing for the termination of the license upon completion of approved procedures in accordance with the conditions specified in the order.

XI. PENALTIES

Section 96. Violations. - Any person who wilfully violates or attempts to violate any provision of this Part or any order issued thereunder by the Commission shall be prosecuted and upon conviction shall be punished in accordance with the penal provision of the Act.

XII. APPENDICES; EFFECTIVITY

Section 97. Appendices. The specific appendices mentioned in the regu1ations in this Part, which are implementary of the Act, are substantially based on Part 50, Title 10, Chapter 1 of the United States Code of Federal Regulations. The Commission hereby adopts a corporate by reference into this Part, as far as appear cable, the equivalent appendices of said Part 50 of this U.S. Code of Federal Regulations unless otherwise excepted by the Commission.

Section 98. Effectivity. This Part shall take effect after fifteen (15) days following its publication in the Official Gazette except that if the Commission finds that the health and safety of the pub1ic or the national interest requires, it may be made effective immediately upon furnishing copies thereof to the persons affected.

Quezon City, 1 December 1981

APPROVED:

(Sgd.) ZOILO M. BARTOLOME, Ph. D.
Commissioner

(Sgd.) Lt. Col. A. VER ALBANO (CWS) PA
Deputy Commissioner